

County of Loudoun
Department of Planning
MEMORANDUM

DATE: July 12, 2010

TO: Jane McCarter, LEED AP, AICP, Project Manager
Land Use Review

FROM: ⁷⁶Pat Gigio, Planner III
Division of Community Planning

SUBJECT: **ZMAP 2009-0003 and SPEX 2009-0027 Luck Stone
2nd Referral**

EXECUTIVE SUMMARY

The applicant, Luck Stone Quarry, propose a Zoning Map Amendment (ZMAP 2009-0003) to rezone approximately 323.7 acres to the MR-HI (Mineral Resource-Heavy Industry) and PD-GI (Planned Development-General Industrial) zoning district in order to expand and operate a stone quarry on the subject site. A separate Special Exception application (SPEX 2009-0027), is being co-processed for the proposed quarry use that encompasses approximately 321.2 acres. The parcels are located within the Transition Policy Area and are zoned PD-GI (Planned Development-General Industrial), JLMA-20 (Joint Land Management Area-20) and TR-10 (Transitional Residential-10). The proposed rezoning and special exception for the quarry use on the subject site conform to the general land use and mineral extractive policies of the Revised General Plan. However, staff has identified several outstanding issues pertaining to permitted accessory uses associated with quarrying activities, the provision of open space, and development of a concept reclamation plan for use of the quarry following cessation of use which requires additional information and further evaluation.

BACKGROUND

The applicant, Luck Stone Quarry, propose a Zoning Map Amendment (ZMAP 2009-0003) to rezone approximately 323.7 acres to the MR-HI (Mineral Resource-Heavy Industry) and PD-GI (Planned Development-General Industrial) zoning district in order to expand and operate a stone quarry on the subject site. A separate Special Exception application (SPEX 2009-0027), is being co-processed for the proposed quarry use that encompasses approximately 321.2 acres. The subject site is comprised of several parcels owned by Luck Stone Quarry, Loudoun Water, and the City of Fairfax which are located within the

Transition Policy Area and are zoned PD-GI (Planned Development-General Industrial), JLMA-20 (Joint Land Management Area-20) and TR-10 (Transitional Residential-10). A small portion of the northwest corner of the site is located within the Town of Leesburg's Urban Growth Area.

The subject site which encompasses the areas for both the rezoning and special exception applications, is roughly bound to the north by property owned by Luck Stone Quarry approved for Quarry D, to the east by property owned by Fairfax City and the Goose Creek Reservoir, to the south by property owned by Loudoun Water and proposed for a Water Treatment Facility (SPEX 2009-0021), to the southwest by Gant Lane (Route 652) and property approved for a Hybrid Energy Park (ZMAP 2009-0005, CMPT 2009-0001 & SPEX 2009-0009) and to the west by Cochran Mill Road (Route 653) and property owned by Loudoun County being developed as Phil Bolen Park.

The subject site is located between two creeks (Sycolin and Goose) and contains significant environmental features, including stream corridor resources, natural drainageways, existing forest cover, wetlands, diabase, and archeological and historic resources. The Quarry Notification (QN) Overlay District also exists on site. The site is located within Ldn 60 1-mile noise contour of the Leesburg Executive Airport.

The applicant responded to Community Planning's first referral comments in a response letter dated May 5, 2010 and Plats revised through May 5, 2010. Upon review of the submitted information, it appears that the majority of outstanding issues have been addressed; however, staff has identified several outstanding issues pertaining to permitted accessory uses associated with quarrying activities, the provision of open space, and development of a concept plan for use of the quarry following cessation of use which requires additional information and further evaluation. Below is a discussion of outstanding issues.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The subject site is governed under the policies outlined in the Revised General Plan, the Revised Countywide Transportation Plan (CTP) as well as the Toll Road Plan (TRP). Being the newer of the two plans, the Revised General Plan supersedes the TRP when there is a policy conflict between the two (Revised General Plan, Chapter 1, Relationship to Other County Planning Documents, text). The subject site is located within the Lower Sycolin Subarea of the Transition Policy Area (Revised General Plan, Chapter 7, Planned Land Use Map).

The land use policies in Chapter 8 for the Transition Policy Area were used to evaluate the rezoning application. The environmental features on the subject site

were assessed applying the Green Infrastructure policies of Chapter 5 (The Green Infrastructure: Environmental, Natural, and Heritage Resources) of the Revised General Plan, including policies pertaining to river and stream corridor resources, wetlands, forest resources, steep and moderately steep slopes, diabase, and plant and wildlife habitat. Chapter 11 of the Plan outlines design guidelines for development in the Transition Policy Area.

OUTSTANDING ISSUES

A. LAND USE

The Transition Policy Area is envisioned to be a distinct planning area that will provide a transition in land development intensity between suburban development in the east and rural development in the west (Revised General Plan, text, p. 8-5). Developments within the Transition Policy Area should fully integrate the elements of the Green Infrastructure and establish natural open spaces as a predominant visual feature (Revised General Plan, Chapter 8, General Policies, Policy 2). The subject property is located within the Lower Sycolin subarea, which the Plan envisions to have a more rural character, with lower residential densities and greater open space requirements, in order to protect the drinking water resource of the Goose Creek Reservoir (Revised General Plan, Chapter 8, General Policies, Policy 1). Plan policies also envision the development of a variety of non-residential uses in the Transition Policy Area which are rural in character and limited in scale, such as equestrian centers, golf courses, active recreation uses, retail nurseries, and kennels (Revised General Plan, Chapter 8, *Community Design Policies, Community Design Policies, Policies 15 & 16*).

The Lower Sycolin sub-area of the Transition Policy Area contains diabase rock which is a non-renewable resource used for the construction of roads and buildings that is only found in limited areas of the County. The County recognizes the importance of this resource and supports the protection of extractive industries like the existing Luck Stone Quarry from incompatible land uses and the encroachment by residential development (Revised General Plan, Chapter 8, Community Design, Lower Sycolin and Middle Goose Subareas, text). County policies support the operation and long-range planning of quarry sites, including setting aside sufficient land for future quarry expansion and the creation of mitigation plans for the sensitive reuse of the quarries after extraction is complete (Revised General Plan, Chapter 5, *Mineral Resource Extraction Policies, Policies 5 & 8*). The proposed use of the subject site for a stone quarrying is consistent with the mineral extractive policies of the Plan and is a logical expansion of the previously approved but undeveloped Quarry D located to the north of the subject site owned by Luck Stone. Quarry D is located within the planned land

use boundary for Extractive Industry and is also located within the Transition Policy Area (SPEX 1990-0019, SPEX 1999-0006 & ZMAP 1999-0004). In general Plan policies encourage the continued operation, and in some cases expansion of quarry facilities due to the economic benefits to the County. The proposed use of the subject site for a stone quarry and the expansion of the previously approved Quarry D is supported by the mineral extractive policies of the Plan

Staff in the first referral had recommended that proffers be developed to restrict the uses on the subject site to "stone quarrying" to ensure compatibility with the surrounding area. The applicant in response would like to reserve the right to construct an "asphalt mixing plant" and/or "concrete mixing plant" on the subject site in the future. These uses are permitted by-right as "accessory" to an approved quarry use in the Zoning Ordinance, but may be inappropriate on the subject site. The proposed "asphalt mixing plant" and "concrete mixing plant" like the quarry are considered heavy industrial uses, however the quarry is the only industrial use identified by the Plan which may be located with the Transition Policy Area. Establishment of a "asphalt mixing plant" and/or "concrete mixing plant" on the subject site would require truck traffic to access the subject site from Cochran Mill Road (Route 653) a sub-standard two-lane local secondary road with segments surfaced in either asphalt or gravel. Luck Stone, through previously approved proffers and conditions related to other legislative applications, has restricted its primary access to Belmont Ridge Road (Route 659), a paved two lane major collector, to separate the industrial traffic from non-industrial developments and to address safety concerns. Luck Stone as part of the current application will continue to utilize Belmont Ridge Road (Route 659) as its primary access to truck quarried stone from the subject site. Plan policies do not support the proliferation of heavy industrial uses, such as the proposed "asphalt mixing plant" and/or "concrete mixing plant" further south on Cochran Mill Road within the Transition Policy Area. The proposed "asphalt mixing plant" and/or "concrete mixing plant" may be more appropriately located within areas planned Industrial within the Suburban Policy Area and/or Towns where the road network and these types of heavy industrial uses are envisioned.

Staff finds that the proposed rezoning and special exception for use of the subject site as a quarry conforms to the general land use and mineral extractive policies of the Revised General Plan. However, staff continues to recommend that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral Resources-Heavy Industry) zoning district to only "stone quarrying" and "water treatment plant" to ensure compatibility with the surrounding area and consistency with Plan policies. The proposal to permit an "asphalt mixing plant" and/or "concrete mixing plant" as an accessory use on the subject site in the future is not supported by Plan policies.

B. EXISTING CONDITIONS

The Green Infrastructure is a collection of natural, cultural, heritage, environmental, protected, passive and active resources that will be integrated in a related system. Elements of the Countywide Green Infrastructure that can be found on the subject site, include river and stream corridor resources, wetlands, forest resources, steep and moderately steep slopes, diabase rock, and plant and wildlife habitat. The site is also impacted by the Ldn 60 1-mile noise contour of the Leesburg Executive Airport and the quarry notification overlay district associated with the Luck Stone Quarry. The County uses integrated management strategies for the Green Infrastructure to ensure that all land use planning and development respect and preserves the holistic nature of the elements of the Green Infrastructure (Revised General Plan, Chapter 5, Green Infrastructure Policies, Policy 2).

Staff in the first referral had identified issues of concern pertaining to mitigation of impacts to jurisdictional wetlands and the utilization of appropriate stormwater management techniques on the subject site which have remained unresolved. Due to the technical nature of these issues staff defers to the Department of Building and Development Environmental Review team (ERT) for further review.

Staff defers to the Department of Building and Development Environmental Review team (ERT) for further technical review of those outstanding issues related to mitigation of impacts to jurisdictional wetlands and utilization of appropriate stormwater management techniques on the subject site.

C. OPEN SPACE

Within the Transition Policy Area, the Plan envisions that natural open spaces will be the predominant visual feature of the landscape and an enhancement to the area's river and stream corridors (Revised General Plan, Chapter 8, General Policies, Policy 2). The County envisions that the Lower Sycolin subarea will have a more rural character with lower residential densities and higher open space requirements than other subareas to facilitate a transition to the Rural Policy Area (Revised General Plan, Chapter 8, Lower Sycolin and Middle Goose Subareas, text).

In the first referral staff had requested additional information pertaining to the provision of open space on the subject site. In response the applicant has stated that given the characteristic of the quarry and the requirements for quarry operations that 70% open space cannot be achieved on the subject site but a significant amount of open space will be delivered at the conclusion of the quarrying activities when the site becomes a reservoir/lake. Luck Stone in their response to referral "envisions that the quarry use will ultimately provide a public

amenity", but are unwilling to commit to its end use at this time since the time horizon for cessation of use is up to 100 years. The submitted "Reclamation Plan" lists a number of possible uses for the quarry pit and surrounding property following cessation use which include a water reservoir in conjunction with Loudoun Water's Central Water Supply program, an outdoor recreation area utilizing the lake as a focal point and/or a nature conservancy as possible end uses. All these possible uses could provide significant amounts of open space, however no commitments have been provided by the applicant.

Staff in the first referral had requested a meeting with the applicant to discuss near-term and long-term opportunities and strategies for achieving and maintaining open space on the subject site. Staff recognizes that the reservation of up to 70% open space in association with an operating quarry may be unrealistic and counter to the goals of the mineral extractive policies; however a unique opportunity exists to develop a significant open space amenity on the subject site following cessation of use which will fulfill the open space policies of the Plan. Staff objects to the applicants claim that it is premature to plan for the final use of the quarry at this time. Plan policies require that an application to permit development of new quarries or expansion of existing quarries include a concept plan for use of the site after extraction is complete (Revised General Plan, Chapter 5, Mineral Resource Extraction Policies, Policies 9). Staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use.

Staff recognizes that the reservation of up to 70% open space in association with an operating quarry may be unrealistic and counter to the goals of the mineral extractive policies, however a unique opportunity exists to develop a significant open space amenity on the subject site following cessation of use which will fulfill the open space policies of the Plan. Staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use.

RECOMMENDATION

The proposed rezoning and special exception for use of the subject site within the Transition Policy Area as a quarry conforms to the general land use and mineral extractive policies of the Revised General Plan. However, staff has identified several outstanding issues pertaining to permitted accessory uses associated with quarrying activities, the provision of open space, and development of a concept plan for use of the quarry following cessation of use which requires additional information and further evaluation. Staff recommends

that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral Resource-Heavy Industry) zoning district to only "stone quarrying" to ensure compatibility with the surrounding area and consistency with Plan policies. Additionally, staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use to ensure that sufficient open space is provided as envisioned by the Plan.

cc: Julie Pastor, AICP, Planning Director
John Merrithew, AICP, Assistant Planning Director, via e-mail

County of Loudoun
Department of Planning
MEMORANDUM

DATE: July 12, 2010

TO: Jane McCarter, LEED AP, AICP, Project Manager
Land Use Review

FROM: Pat Giglio, Planner III^{PG}
Division of Community Planning

SUBJECT: ZMAP 2009-0004 Loudoun Water and Luck Stone Quarry, 2nd Referral

EXECUTIVE SUMMARY

The applicants, Loudoun Water and Luck Stone Quarry, propose a Zoning Map Amendment (ZMAP) to rezone approximately 148.81 acres from TR-10 (Transitional Residential-10) to the MR-HI (Mineral Resource-Heavy Industry) to operate a water treatment facility and stone quarry on the subject site. The proposed rezoning and principal uses appear to conform to the general land use, mineral extractive and public facilities policies of the Revised General Plan. However, staff has identified several outstanding issues pertaining to permitted accessory uses associated with quarrying activities, the provision of open space, and development of a concept plan for use of the quarry following cessation of use which requires additional information and further evaluation.

BACKGROUND

The applicants, Loudoun Water and Luck Stone Quarry, propose a Zoning Map Amendment (ZMAP) to rezone approximately 148.81 acres from TR-10 (Transitional Residential-10) to the MR-HI (Mineral Resource-Heavy Industry) to operate a water treatment facility and stone quarry on the subject site. The subject site is bound to the north by property owned by Luck Stone Quarry planned for quarry operation, to the east by the Goose Creek and property owned by Fairfax City and its reservoir, to the south by the Dulles Greenway (Route 267) and to the west by Gant Lane (Route 652) and the future Hybrid Energy Park (ZMAP 2009-0005, CMPT 2009-0001 & SPEX 2009-0009). The proposed water treatment facility will occupy a 50-acre portion of the site located on the southern edge of the property adjoining the Dulles Greenway (Route 267); the remainder of the property to the north is proposed for mineral extractive uses and will be developed as a stone quarry.

The subject site is bordered to the east by Goose Creek and contains significant environmental features, including stream corridor resources, natural drainageways, existing forest cover, wetlands, diabase, and archeological and historic resources. The Quarry Notification (QN) Overlay District also exists on site. The site is located within Ldn 60 1-mile noise contour of the Leesburg Executive Airport.

The applicant responded to Community Planning's first referral comments in a response letter dated May 5, 2010 and Plat revised through May 5, 2010. Upon review of the submitted information, it appears that the majority of outstanding issues have been addressed; however, staff has identified several outstanding issues pertaining to permitted accessory uses associated with quarrying activities, the provision of open space, and development of a concept plan for use of the quarry following cessation of use which requires additional information and further evaluation. Below is a discussion of outstanding issues.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The subject site is governed under the policies outlined in the Revised General Plan, the Revised Countywide Transportation Plan (CTP) as well as the Toll Road Plan (TRP). Being the newer of the two plans, the Revised General Plan supersedes the TRP when there is a policy conflict between the two (Revised General Plan, Chapter 1, Relationship to Other County Planning Documents, text). The subject site is located within the Lower Sycolin Subarea of the Transition Policy Area (Revised General Plan, Chapter 7, Planned Land Use Map).

The land use policies in Chapter 8 for the Transition Policy Area and the water and wastewater policies in Chapter 2 of the Revised General Plan were used to evaluate the rezoning application. The environmental features on the subject site were assessed applying the Green Infrastructure policies of Chapter 5 (The Green Infrastructure: Environmental, Natural, and Heritage Resources) of the Revised General Plan, including policies pertaining to river and stream corridor resources, wetlands, forest resources, steep and moderately steep slopes, diabase, and plant and wildlife habitat. Chapter 11 of the Plan outlines design guidelines for development in the Transition Policy Area.

OUTSTANDING ISSUES

A. LAND USE

The Transition Policy Area is envisioned to be a distinct planning area that will provide a transition in land development intensity between suburban development in the east and rural development in the west (Revised General Plan, text, p. 8-5). Developments within the Transition Policy Area should fully

integrate the elements of the Green Infrastructure and establish natural open spaces as a predominant visual feature (Revised General Plan, Chapter 8, General Policies, Policy 2). The subject property is located within the Lower Sycolin subarea, which the Plan envisions to have a more rural character, with lower residential densities and greater open space requirements, in order to protect the drinking water resource of the Goose Creek Reservoir (Revised General Plan, Chapter 8, General Policies, Policy 1). Plan policies also envision the development of a variety of non-residential uses in the Transition Policy Area which are rural in character and limited in scale, such as equestrian centers, golf courses, active recreation uses, retail nurseries, and kennels (Revised General Plan, Chapter 8, *Community Design Policies, Community Design Policies, Policies 15 & 16*).

Loudoun Water in cooperation with the County is responsible for the provision and extension of public water and sewer service in the Suburban Policy Area and Transition Policy Area (Revised General Plan, Chapter 2, *General Water and Wastewater Policies, Policy 7*). Loudoun Water currently relies on Fairfax City's Goose Creek Impoundment and the Fairfax County Potomac River intake as the major central water supply sources; however the policies of the Plan envision that the County will develop its own independent central water supply sources. Loudoun Water recently received approval by the County to utilize the existing Luck Stone Quarry A, located on the east side of Goose Creek for the storage of raw water in a process referred to as "water banking" (CMPT 2009-0006, SPEX 2009-0020, SPEX 2009-0033 and SPMI 2009-0009). Water is withdrawn from the Potomac River during times of normal to high water flow and then pumped to the quarry for storage. Loudoun Water would then withdraw water from the quarry as necessary to meet demands and pump the raw water to the proposed water treatment facility located on the subject site (SPEX 2009-0021), after the treated water would be distributed through the central water system. The proposal to locate a water treatment facility on the subject site is supported by the general water and wastewater policies of the Plan.

The Lower Sycolin sub-area of the Transition Policy Area contains diabase rock which is a non-renewable resource used for the construction of roads and buildings that is only found in limited areas of the County. The County recognizes the importance of this resource and supports the protection of extractive industries like the existing Luck Stone Quarry from incompatible land uses and the encroachment by residential development (Revised General Plan, Chapter 8, Community Design, Lower Sycolin and Middle Goose Subareas, text). County policies support the operation and long-range planning of quarry sites, including setting aside sufficient land for future quarry expansion and the creation of mitigation plans for the sensitive reuse of the quarries after extraction is complete (Revised General Plan, Chapter 5, *Mineral Resource Extraction Policies, Policies*

5 & 8). The proposed use of the northern half of the subject site for a stone quarrying is consistent with the mineral extractive policies of the Plan and is a logical expansion of the proposed quarry use to the north, which is concurrently being processed as ZMAP 2009-0003 & SPEX 2009-0027. The two proposed quarries would form a contiguous pit which would be connected to the previously approved Quarry D located to the north of the subject site which is within the planned land use boundary for Extractive Industry and is also located within the Transition Policy Area a (SPEX 1990-0019, SPEX 1999-0006 & ZMAP 1999-0004). In general Plan policies encourage the continued operation, and in some cases expansion of quarry facilities due to the economic benefits to the County. The proposed use of the northern half of the subject site for a stone quarrying is supported by the mineral extractive policies of the Plan

Staff in the first referral had recommended that proffers be developed to restrict the uses on the subject site to only "water treatment plant" and "stone quarrying" to ensure compatibility with the surrounding area. The applicant in response would like to reserve the right to construct an "asphalt mixing plant" and/or "concrete mixing plant" on the subject site in the future. These uses are permitted by-right as "accessory" to an approved quarry use in the Zoning Ordinance, but may be inappropriate on the subject site. The proposed "asphalt mixing plant" and "concrete mixing plant" like the quarry are considered heavy industrial uses, however the quarry is the only industrial use identified by the Plan which may be located with the Transition Policy Area. Establishment of a "asphalt mixing plant" and/or "concrete mixing plant" on the subject site would require truck traffic to access the subject site from Cochran Mill Road (Route 653) a sub-standard two-lane local secondary road with segments surfaced in either asphalt or gravel. Luck Stone, through previously approved proffers and conditions related to other legislative applications, has restricted its primary access to Belmont Ridge Road (Route 659), a paved two lane major collector, to separate the industrial traffic from non-industrial developments and to address safety concerns. Luck Stone as part of the current application will continue to utilize Belmont Ridge Road (Route 659) as its primary access to truck quarried stone from the subject site. Plan policies do not support the proliferation of heavy industrial uses, such as the proposed "asphalt mixing plant" and/or "concrete mixing plant" further south on Cochran Mill Road within the Transition Policy Area. The proposed "asphalt mixing plant" and/or "concrete mixing plant" may be more appropriately located within areas planned Industrial within the Suburban Policy Area and/or Towns where the road network and these types of heavy industrial uses are envisioned.

Staff finds that the proposed rezoning of the subject site for use as a quarry and water treatment facility conforms to the general land use, mineral extractive and public facilities policies of the Revised General Plan. Staff continues to recommend that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral

Resource-Heavy Industry) zoning district to only “stone quarrying” and “water treatment plant” to ensure compatibility with the surrounding area and consistency with Plan policies. The proposal to permit an “asphalt mixing plant” and/or “concrete mixing plant” as an accessory use on the subject site in the future is not supported by Plan policies.

B. EXISTING CONDITIONS

The Green Infrastructure is a collection of natural, cultural, heritage, environmental, protected, passive and active resources that will be integrated in a related system. Elements of the Countywide Green Infrastructure can be found on the subject site, including river and stream corridor resources, wetlands, forest resources, steep and moderately steep slopes, diabase rock, and plant and wildlife habitat. The site is also impacted by the Ldn 60 1-mile noise contour of the Leesburg Executive Airport and the quarry notification overlay district associated with the Luck Stone Quarry. The County uses integrated management strategies for the Green Infrastructure to ensure that all land use planning and development respect and preserves the holistic nature of the elements of the Green Infrastructure (Revised General Plan, Chapter 5, Green Infrastructure Policies, Policy 2).

Staff in the first referral had identified issues of concern pertaining to mitigation of impacts to jurisdictional wetlands and the utilization of appropriate stormwater management techniques on the subject site which have remained unresolved. Due to the technical nature of these issues staff defers to the Department of Building and Development Environmental Review team (ERT) for further review.

Staff defers to the Department of Building and Development Environmental Review team (ERT) for further technical review of those outstanding issues related to mitigation of impacts to jurisdictional wetlands and utilization of appropriate stormwater management techniques on the subject site.

C. OPEN SPACE

Within the Transition Policy Area, the Plan envisions that natural open spaces will be the predominant visual feature of the landscape and an enhancement to the area's river and stream corridors (Revised General Plan, Chapter 8, General Policies, Policy 2). The County envisions that the Lower Sycolin subarea will have a more rural character with lower residential densities and higher open space requirements than other subareas to facilitate a transition to the Rural Policy Area (Revised General Plan, Chapter 8, Lower Sycolin and Middle Goose Subareas, text).

In the first referral staff had requested additional information pertaining to the provision of open space on the subject site. In response the applicant has stated

that the 50 acre portion of the subject site proposed for the water treatment plant will provide a minimum of 70% open space, however, given the characteristics of the quarry and the requirements for mineral extraction, 70% open space cannot be achieved on the remainder of the site but a significant amount of open space could be delivered at the conclusion of the quarrying activities when the site becomes a reservoir/lake. Luck Stone in their response to referral "envisioned that the quarry use will ultimately provide a public amenity", but are unwilling to commit to its end use at this time since the time horizon for cessation of use is up to 100 years. The submitted "Reclamation Plan" lists a number of possible uses for the quarry pit and surrounding property following cessation use which include a water reservoir in conjunction with Loudoun Water's Central Water Supply program, an outdoor recreation area utilizing the lake as a focal point and/or a nature conservancy as possible end uses. All these possible uses could provide significant amounts of open space, however no commitments have been provided by the applicant.

Staff in the first referral had requested a meeting with the applicant to discuss near-term and long-term opportunities and strategies for achieving and maintaining open space on the subject site. Staff recognizes that the reservation of up to 70% open space in association with an operating quarry may be unrealistic and counter to the goals of the mineral extractive policies; however a unique opportunity exists to develop a significant open space amenity on the subject site following cessation of use which will fulfill the open space policies of the Plan. Staff objects to the applicants claim that it is premature to plan for the final use of the quarry at this time. Plan policies require that an application to permit development of new quarries or expansion of existing quarries include a concept plan for use of the site after extraction is complete (Revised General Plan, Chapter 5, Mineral Resource Extraction Policies, Policies 9). Staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use.

Staff recognizes that the reservation of up to 70% open space in association with an operating quarry may be unrealistic and counter to the goals of the mineral extractive policies, however a unique opportunity exists to develop a significant open space amenity on the subject site following cessation of use which will fulfill the open space policies of the Plan. Staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use.

Staff recommends that the applicant meet with County staff prior to the development and submission of the concept reclamation plan to discuss near-term and long-term opportunities for achieving and maintaining open space on the subject site.

RECOMMENDATION

The proposed rezoning of the subject site for use as a quarry and water treatment facility on the subject site within the Transition Policy Area is supported by the land use, mineral extractive and public facilities policies of the Revised General Plan. However, staff has identified several outstanding issues pertaining to permitted accessory uses associated with quarrying activities, the provision of open space, and development of a concept plan for use of the quarry following cessation of use which requires additional information and further evaluation. Staff recommends that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral Resource-Heavy Industry) zoning district to only "stone quarrying" and "water treatment plant" to ensure compatibility with the surrounding area and consistency with Plan policies. Additionally, staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use to ensure that sufficient open space is provided as envisioned by the Plan.

cc: Julie Pastor, AICP, Planning Director
John Merrithew, AICP, Assistant Planning Director, via e-mail

County of Loudoun
Department of Planning

MEMORANDUM

DATE: November 25, 2009

TO: Nicole Steele, LEED AP, Project Manager
Land Use Review

FROM: Pat Gigio, Planner III
Division of Community Planning

SUBJECT: ZMAP 2009-0003 Luck Stone Quarry
ZMAP 2009-0004 Loudoun Water and Luck Stone Quarry

EXECUTIVE SUMMARY

The proposed Zoning Map Amendment (ZMAP) applications are requesting a rezoning of three contiguous parcels totaling 354.6 acres to the MR-HI (Mineral Resources-Heavy Industry) and PD-GI (Planned Industrial) zoning district in order to expand and operate a stone quarry and establish a water treatment facility on the subject site. The parcels are located within the Transition Policy Area and are zoned JLMA-20 (Joint Land Management Area-20) and TR-10 (Transitional Residential-10). A separate Special Exception application (SPEX 2009-0027) is being co-processed for the proposed quarry use and a Special Exception (SPEX 2009-0021), Minor Special Exception (SPMI 2009-0006) and Commission Permit (CMPT 2009-0007) are being co-processed for the proposed water treatment facility.

The proposed rezoning of the subject site to the MR-HI (Mineral Resources-Heavy Industry) and PD-GI (Planned Industrial) zoning district for use as a quarry and water treatment facility appears to conform with the general land use, mineral extractive and public facilities policies of the Revised General Plan. However, staff requests additional information pertaining to impacts to environmental features and site design to fully evaluate the rezoning applications and their conformance with Plan policies.

BACKGROUND

Luck Stone Corporation of Richmond, Virginia, has submitted an application to rezone two parcels encompassing 186.23 acres from JLMA-20 (Joint Land Management Area-20) and TR-10 (Transitional Residential-10) to the MR-HI (Mineral Resources-Heavy Industry) and PD-GI (Planned Industrial) zoning district in order to expand and operate a stone quarry. Loudoun Water and Luck Stone have jointly submitted an application to rezone an adjoining parcel encompassing 168.37 acres from TR-10 (Transitional Residential-10) to the MR-HI (Mineral Resources-Heavy Industry) and PD-GI (Planned Industrial) zoning district in order to expand and operate a stone quarry and establish a water treatment facility. The proposed water treatment facility will occupy a 50-acre portion of the site located on the southern edge

of the property adjoining the Dulles Greenway (Route 267), the remainder of the property is proposed for mineral extractive uses. The three contiguous parcels total 354.6 acres, of this 5.04 acres is being rezoned to PD-GI which forms a narrow band along the eastern boundary of the parcels adjoining Goose Creek and property owned by the City of Fairfax. The request to rezone to PD-GI would allow a reduction in the required buffer yard surrounding the proposed quarry operation.

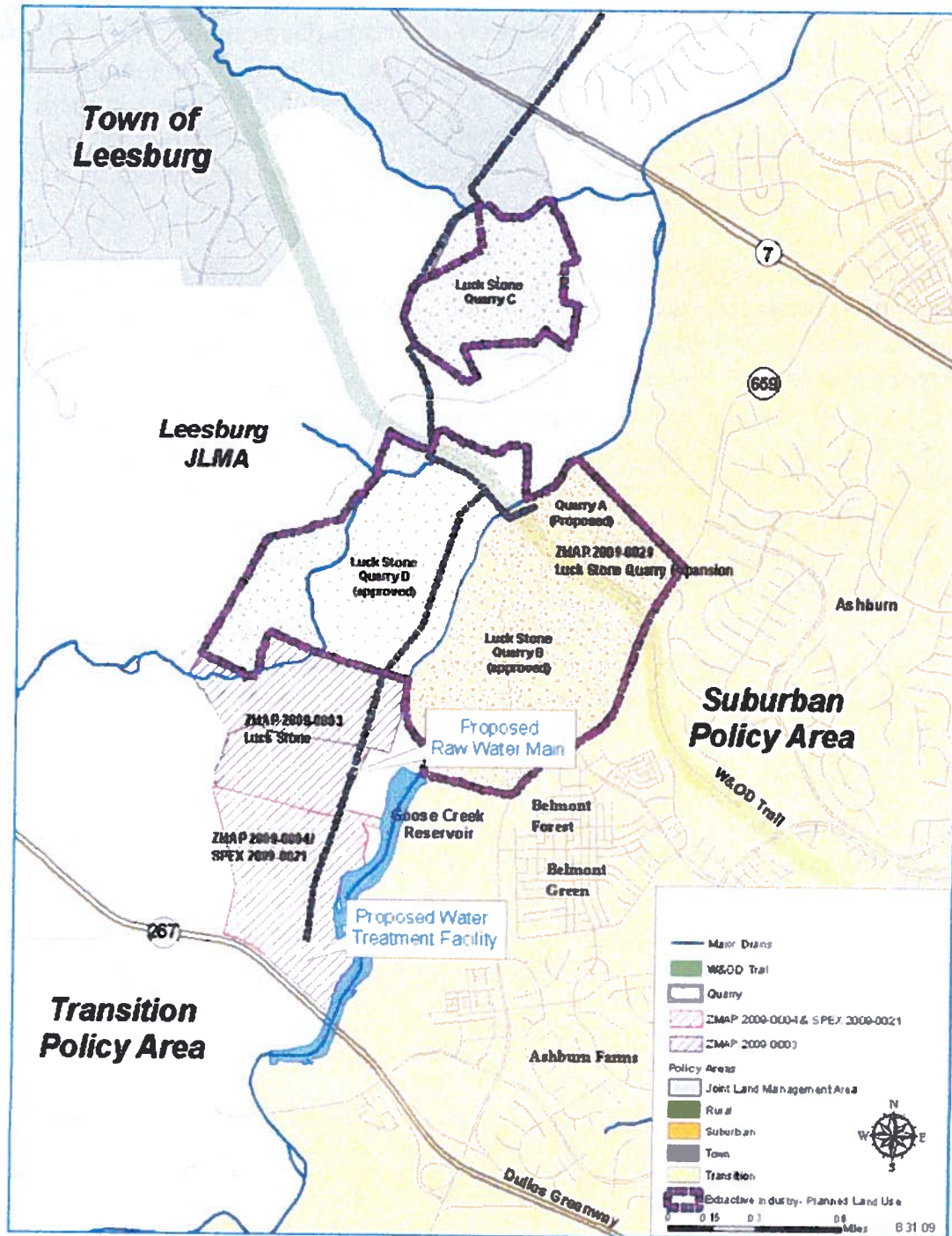
The subject site consists of three parcels that are generally bounded to the north by Sycolin Creek, to the east by the Goose Creek and its reservoir, to the south by the Dulles Greenway (Route 267) and to the west by Gant Lane (Route 652). Existing and planned developments surrounding the site include Luckstone Quarry to the north and northeast, the City of Fairfax Water Treatment plant to the east, and several residential communities (including Goose Creek Village and Goose Creek Preserve) to the east and south. A small portion of the northwest corner of the site is located within the Town of Leesburg's Urban Growth Area.

The subject site is located between two creeks (Sycolin and Goose) and contains significant environmental features, including stream corridor resources, natural drainageways, existing forest cover, wetlands, diabase, and archeological and historic resources. The Quarry Notification (QN) Overlay District also exists on site. The site is located within Ldn 60 1-mile noise contour of the Leesburg Executive Airport.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The subject site is governed under the policies outlined in the Revised General Plan, the Revised Countywide Transportation Plan (CTP) as well as the Toll Road Plan (TRP). Being the newer of the two plans, the Revised General Plan supersedes the TRP when there is a policy conflict between the two (Revised General Plan, Chapter 1, Relationship to Other County Planning Documents, text). The subject site is located within the Lower Sycolin Subarea of the Transition Policy Area (Revised General Plan, Chapter 7, Planned Land Use Map).

The land use policies in Chapter 8 for the Transition Policy Area and the water and wastewater policies in Chapter 2 of the Revised General Plan were used to evaluate the applications. The environmental features on the subject site were assessed applying the Green Infrastructure policies of Chapter 5 (The Green Infrastructure: Environmental, Natural, and Heritage Resources) of the Revised General Plan, including policies pertaining to river and stream corridor resources, wetlands, forest resources, steep and moderately steep slopes, diabase, and plant and wildlife habitat. Chapter 11 of the Plan outlines design guidelines for development in the Transition Policy Area.



ANALYSIS

A. LAND USE

The Transition Policy Area is envisioned to be a distinct planning area that will provide a transition in land development intensity between suburban development in the east and rural development in the west (Revised General Plan, text, p. 8-5). Developments within the Transition Policy Area should fully integrate the elements of the Green Infrastructure and establish natural open spaces as a predominant visual feature (Revised General Plan, Chapter 8, General Policies, Policy 2). The Transition Policy Area consists of six subareas, each with their own planned densities and development patterns.

The subject property is located within the Lower Sycolin subarea, which the Plan envisions to have a more rural character, with lower densities and greater open space requirements, in order to protect the drinking water resource of the Goose Creek Reservoir (Revised General Plan, Chapter 8, General Policies, Policy 1). This area is planned for residential development at 1 dwelling per 10 acres in a clustered pattern, with the option to rezone to a density of 1 dwelling per 3 acres if developed as a Rural Village. Plan policies also envision the development of a variety of non-residential uses in the Transition Policy Area which include, but are not limited to, equestrian centers, golf courses, active recreation uses, retail nurseries, boarding schools and kennels, and compatible institutional uses, provided they meet specific criteria that address the nature, scale, and intensity of the use, market area, and design characteristics. These non-residential uses will serve to define the Transition Policy Area as a unique planning area that provides a transition from suburban to rural land uses (Revised General Plan, Chapter 8, *Community Design Policies, Community Design Policies, Policies 15 & 16*)

The Lower Sycolin subarea contains concentrations of diabase rock used for the construction of roads and buildings. The County recognizes the importance of this resource and supports the protection of extractive industries like the existing Luck Stone Quarry from incompatible land uses and the encroachment by residential development (Revised General Plan, Chapter 8, Community Design, Lower Sycolin and Middle Goose Subareas, text). County policies support the operation and long-range planning of quarry sites, including setting aside sufficient land for future quarry expansion and the creation of mitigation plans for the sensitive reuse of the quarries after extraction is complete (Revised General Plan, Chapter 5, Mineral Resource Extraction Policies, Policies 5, 8 & 9). The proposed expansion of the existing Luck Stone Quarry, while located within area designated for residential uses with the Transition Policy Area and not within the planned land use boundaries for Extractive Industry uses as defined by the Revised General Plan, may be reasonable given the unique location of the site in proximity to the existing quarry and the presence of valuable concentrations of diabase rock. The properties to the north of the subject site, owned by Luck Stone, were rezoned to MR-HI and approved for quarry uses (known as Quarry D) under SPEX 1990-0019, ZMAP 1999-0004 and SPEX 1999-0006. The rezoning of the subject site would expand the MR-HI zoning district and the expansion of the quarry use would be consistent

with the other mineral extractive and industrial uses already zoned, planned and approved for the area.

County policies state that Loudoun Water will continue to be responsible for the provision and extension of public water and sewer service in the Suburban Policy Area and Transition Policy Area (Revised General Plan, Chapter 2, General Water and Wastewater Policies, Policy 7). The County in cooperation with Loudoun Water will develop long-range plans for the provision of central water supply sources for the County. The County will continue to rely on Fairfax City's Goose Creek Impoundment and the Fairfax County Potomac River intake as the major central water supply sources. For the Suburban and Transition Policy Areas, other water-supply options, including the existing Potomac River water plants operated by the Town of Leesburg and the Fairfax County Water Authority and the construction of its own water facility on the Potomac, may be considered (Revised General Plan, Chapter 2, General Water Policies, Policy 2). The proposal to locate a water treatment facility on the subject site is supported by the general water and wastewater policies of the Plan. The use of the subject site for a water treatment facility is part of Loudoun Water's long-range Central Water Supply Program. The Central Water Supply Program is a two-phased program designed to meet current and projected water needs for the next 30 years by withdrawing raw, non-potable water directly from the Potomac River, storing it for future use in existing quarries nearby, and processing drinking water at the proposed water treatment facility on the subject site.

Staff finds that the proposed rezoning of the subject site for use as a quarry and water treatment facility conforms to the general land use, mineral extractive and public facilities policies of the Revised General Plan.

Staff recommends that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral Resources-Heavy Industry) zoning district to only "stone quarrying" and "water treatment plant" to ensure compatibility with the surrounding area.

B. EXISTING CONDITIONS

The Green Infrastructure is a collection of natural, cultural, heritage, environmental, protected, passive and active resources that will be integrated in a related system. It includes stream corridor resources, forests and vegetative landscapes, mineral resources, wildlife and endangered species habitats, heritage resources, scenic corridors, parks, greenways, trails, and recreational facilities (Revised General Plan, Chapter 5, Green Infrastructure Policies, Policy 1). The County uses integrated management strategies for the Green Infrastructure to ensure that all land use planning and development respect and preserves the holistic nature of the elements of the Green Infrastructure (Revised General Plan, Chapter 5, Green Infrastructure Policies, Policy 2).

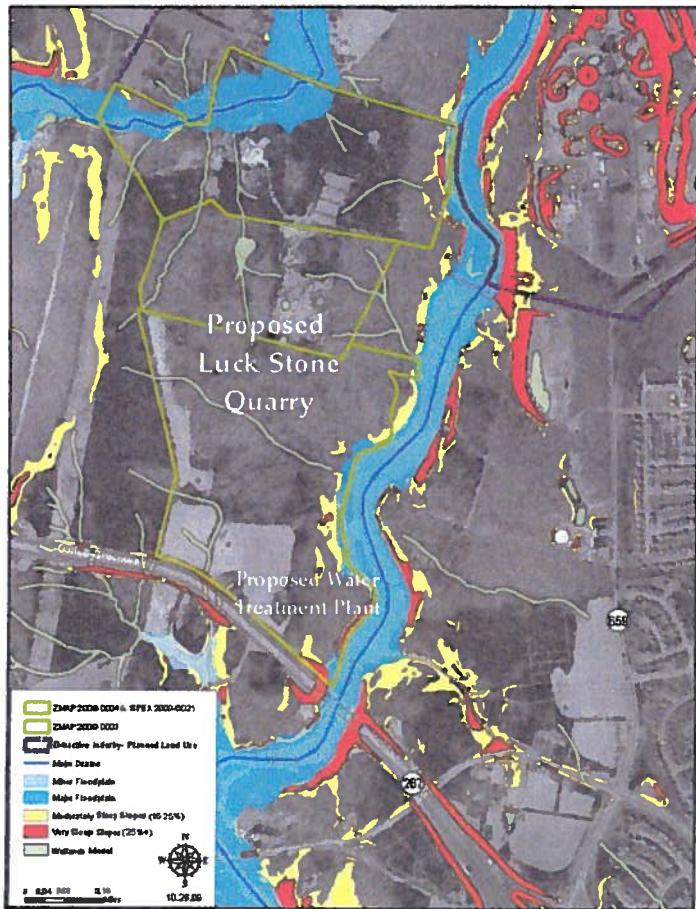
Elements of the Countywide Green Infrastructure can be found on the subject site, including river and stream corridor resources, wetlands, forest resources, steep and moderately steep slopes, diabase rock, and plant and wildlife habitat. The site is also impacted by the Ldn 60 1-mile noise contour of the Leesburg Executive Airport and the quarry notification overlay

district associated with the Luck Stone Quarry. Detailed plan guidance on the treatment of individual Green Infrastructure elements is outlined in the following sections.

1. River & Stream Corridor Resources

The subject site is located within the Goose Creek watershed and contains significant river and stream resources associated with both Sycolin Creek and Goose Creek. Sycolin Creek is a tributary of Goose Creek, which in turn flows into the Potomac River. A portion of Goose Creek has been impounded just east of the subject property, forming the Goose Creek Reservoir (*Revised General Plan, Chapter 5, River and Stream Corridor Resources Map & Major and Sub-Watersheds Map*).

The subject site also contains major and minor floodplain, ponds, wetlands, riparian vegetation and moderately steep slopes



The Revised General Plan identifies river and stream corridor resources as significant elements of the Green Infrastructure. The Plan calls for a 50-foot management buffer surrounding 100-year floodplains and adjacent steep slopes in order to protect the stream corridor from upland disturbance and adjacent development (*Revised General Plan, Chapter 5, River and Stream Corridor Resources Policies, Policy 2*). Within the floodplain and 50-foot management buffer, uses are limited to activities that will support and enhance the biological integrity and health of the river and stream corridor, including passive and active recreation, road crossings, pervious paths and trails, and agricultural activities (*Revised General Plan, Chapter 5, River*

and Stream Corridor Resources Policies, Policy 18).

Goose Creek in Loudoun County is designated as a "Scenic River" by the Commonwealth of Virginia and is further protected by Plan policy which calls for the establishment of a 300-foot no-build buffer wherever it exceeds the 50-foot management buffer (*Revised General Plan, Chapter 5, Scenic Rivers and the Potomac River Policies, Policy 1*). The Plan also recommends the voluntary establishment of a greenbelt along Goose Creek and its reservoir which extends 1,000 feet beyond the 300-foot no-build buffer (*Revised General Plan, Chapter 8, Community Design Policies, Policy 13b*). The 1,000-foot voluntary greenbelt envisioned by the Plan to surround Goose Creek and its reservoir has not been provided, though a 300-foot

no-build buffer has been provided. The submitted Concept Development Plans (CDPs) depict the 300-foot no-build buffer and the individual river and stream corridor resources, which include the floodplain limits, adjacent steep slopes, wetlands and the 50-foot management buffer; however, in several locations these river and stream corridor elements extend beyond the no-build buffer. In these situations it may be appropriate to extend the no-build buffer to protect these features to protect the integrity of these river and stream corridor resources and contribute to the 1,000 foot voluntary greenbelt along Goose Creek. Staff is particularly concerned with the proposed development on moderately steep slopes adjacent to the Goose Creek reservoir.

Sycolin Creek bisects the northwestern boundary of the subject site. The applicant has included the 50-foot management buffer surrounding Sycolin Creek and has depicted the individual river and stream corridor resources on the CDP. Several archaeological sites, wetlands areas and natural drainages are located outside the 50-foot management area which should be preserved and protected. Plan policies call for the County to work with the U.S. Army Corps of Engineers', regional office to regulate wetlands outside of the river and stream corridors (*Revised General Plan, Chapter 5, River and Stream Corridor Resources Policies, Policy 13*). Staff recommends that the applicant protect the river and stream corridor resources located outside the 50-foot management buffer associated with Sycolin Creek.

Staff recommends that the 300-foot no build buffer adjoining Goose Creek and the 50-foot management buffer adjoining Sycolin Creek be expanded in certain locations to protect the elements of the river and stream corridors as an integrated system and to further protect Goose Creek as an important regional water source. Additionally, staff recommends that the river and stream corridor resources located outside the 50-foot management buffer associated with Sycolin Creek be preserved and protected.

2. Wetlands

The County supports the federal goal of no net loss to wetlands (*Revised General Plan, Chapter 5, River and Stream Corridor Resources, Policy 23*) and seeks to protect its green infrastructure elements and recapture elements where possible (*Revised General Plan, Chapter 6, Green Infrastructure, text*). Mitigating wetland and stream impacts close to the impact area help maintain water quality and flood protection functions, as well as habitat. The proposed quarry expansion will impact several wetland areas which have been delineated on the submitted plat.

Staff recommends that impacts to all jurisdictional wetlands and streams on the subject site be mitigated. Staff recommends that the applicant commit to prioritizing any required wetland mitigation as follows: 1) on-site, 2) within the Goose Creek Watershed within the same Planning Policy Area, 3) within the Goose Creek Watershed outside the Planning Policy Area, and 4) Loudoun County, subject to approval by the Army Corp of Engineers and the Virginia Department of Environmental Quality (DEQ). Furthermore, degraded wetlands should be restored if those sites are of significant

merit. Staff defers to the ERT staff regarding the avoidance or mitigation of specific wetlands impacts and the restoration of degraded sites.

3. Surface and Groundwater Resources

The subject site contains streams and drainageways, which ultimately drain into Goose Creek. Plan policies recognize that “soil erosion and deposits of sediment in receiving streams and water bodies is the single largest contributor to degradation of stream water quality” (*Revised General Plan, Chapter 5, Surface Water Policies, Policy 6*). The Plan also calls for implementation of a comprehensive groundwater protection strategy to protect ground water from contamination and ensure adequate recharge rates are maintained to ensure adequate stream flow (*Revised General Plan, Chapter 5, Groundwater Policies, Policies 1&4*). Preserving these streams that ultimately drain into Goose Creek watershed is essential to protecting both surface water and ground water quality. Quarrying operations may threaten groundwater and stream water quality (*Revised General Plan, Chapter 5, Mineral Resource Extraction Areas, text*). The Plan promotes the use of low impact development (LID) techniques, which integrate hydrologically functional designs with methods for preventing pollution (*Revised General Plan, Chapter 5, Surface and Groundwater policy 2*). LID uses natural vegetation and small-scale treatment systems to treat and infiltrate rainfall close to the source and can include permeable paving, vegetative buffer or filter strips to dissipate, filter and infiltrate surface water run-off.

Staff requests that the applicant provide information regarding stormwater management and LID techniques proposed for the subject site. Staff recommends the use of best management practices (BMP) and low impact development (LID) techniques to dissipate, filter and infiltrate surface water run-off.

Staff defers review of the Hydrogeologic and Geotechnical Report submitted with the application to the Engineering Division of Building and Development.

4. Existing Forest Cover

The subject site is heavily forested. The *Revised General Plan* calls for the protection of forests and natural vegetation for the various economic and environmental benefits that they provide (*Revised General Plan, Forest Trees and Vegetation Policies, Policy 1*). Plan policies also call for the submittal and approval of a tree conservation or forest management plan prior to any land development that “demonstrates a management strategy that ensures the long-term sustainability of any designated tree save area” (*Revised General Plan, Forest Trees and Vegetation Policies, Policy 3*)).

The applications include Forest Cover Type Inventory/Management Plan prepared by Zimar & Associates, Inc. that describes the species, quality, age, and location of the existing vegetation. The highest quality forest cover is located along Goose Creek and its reservoir as well as small areas in the interior of the site comprised of hardwood stands of mixed oaks and hickory.

Staff supports the preservation of existing vegetation into the overall site design of the proposed quarry expansion to the maximum extent possible for several reasons, from maintaining the site's natural flora and fauna to providing a superior buffer and improving the overall aesthetics for the site. The incorporation of existing vegetation into the proposed development is also consistent with the rural character envisioned in the Plan for developments in the Transition Policy Area. For these reasons, the application should commit to the provision of on the subject site. Staff places a high priority on preservation of the natural vegetation within and adjoining the recommended 50-foot management buffer adjacent to Sycolin Creek and the 300-foot no-build buffer adjacent to Goose Creek and its reservoir in order to protect water resources. Additionally the applicant may consider reforesting areas of the subject site.

Staff recommends that the application be revised in order to preserve as much of the existing vegetation as possible. Particular attention should be given to preserving and maintaining the existing forest cover adjacent to Sycolin and Goose Creeks. Additionally, the applicant may consider reforesting areas of the subject site. Staff recommends that the County Forester be afforded the opportunity to evaluate any reforestation plans.

Staff further recommends a commitment to a long-term maintenance plan and forestry best management practices for any proposed tree conservation areas (TCAs)

5. Plant and Wildlife Habitats

In an effort to prevent habitat fragmentation the County will strive to protect, preserve, and create large-scale plant and wildlife habitats that overlap with other important resources and resource systems within the Green Infrastructure (*Revised General Plan, Chapter 5, Plant and Wildlife Habitats Policies, text*). Plan policies state that development applications with the likelihood of impacting one or more natural heritage resources will conduct a species assessment and develop a plan for impact avoidance if the presence of a natural heritage resource is identified. The Virginia Department of Conservation and Recreation (DCR), Division of Natural Heritage (DNH) defines natural heritage resources to include rare, threatened, and endangered plant and animal species; exemplary natural communities, habitats, and ecosystems; and significant geologic formations (*Revised General Plan, Chapter 5, Plant and Wildlife Habitats Policies, Policy 8*).

The application materials contain two separate Endangered and Threatened Species Habitat Evaluation and Rare Plant Species/Community Assessments, prepared by Wetland Studies and Solutions, Inc. in December 2008 and July 2009 for the subject site. The assessment identified the following natural heritage resources within the study area:

- One state-threatened plant species (American ginseng) in several locations on the southeastern portion of the site adjacent to the Goose Creek Reservoir,

- One rare plant community (Northern Hardpan Basic Oak-Hickory Forest) in two locations on the eastern and southeastern portion of the site adjacent to the Goose Creek Reservoir;
- Suitable habitat for the wood turtle, a state-threatened species, along Sycolin Creek, Goose Creek and Goose Creek Reservoir;
- Suitable habitat for the bald eagle, a state-endangered and federally-listed threatened species, along Goose Creek and Goose Creek Reservoir, and,
- Potential foraging habitat for the loggerhead shrike, a state-threatened bird species, within a series of fields in the center and southern portions of the site with diabase plant habitats (*Endangered and Threatened Species Habitat Evaluation and Rare Plant Species/Community Assessment, Wetland Studies and Solutions, Inc., December 1, 2008 and July 1, 2009*)

For a previous larger rezoning application (ZMAP 2005-0028, Creekside), which included all of the subject site and other adjoining properties, the Department of Conservation and Recreation (DCR) reviewed the project (dated January 18, 2006) and recommended that the application preserve the Northern Hardpan Basic Oak-Hickory significant communities. DCR also recommended that the applicant conduct additional surveys of suitable habitat for rare diabase species in June 2006 and coordinate with the Virginia Game and Inland Fisheries (VDGIF) and the United States Fish and Wildlife Service (USFWS) regarding compliance with protected species legislation.

Staff defers to DCR regarding natural heritage resources, but strongly concurs with DCR's recommendations to preserve the Northern Hardpan Basic Oak-Hickory significant communities as well as the identified American Ginseng individuals. These resources are located in close proximity to Goose Creek and the Goose Creek Reservoir and are within the 300-foot no build buffer and recommended 1,000-foot voluntary greenbelt. Staff continues to advocate the expansion of the 300-foot no build buffer in certain locations adjoining Goose Creek to protect these natural heritage resources as an integrated system in conjunction with the river and stream corridor resources.

Staff also recommends that the applicant preserve and buffer suitable habitat for the wood turtle along Sycolin Creek, Goose Creek and Goose Creek Reservoir. The applicant should develop a mitigation strategy to search for and relocate individual wood turtles within the limits of clearing before the initiation of any ground disturbing activities.

6. Historic Resources

The Revised General Plan states the County will require an archaeological and historic resources survey as part of all development applications (*Revised General Plan, Chapter 5, Historic and Archaeological Resources Policies, Historic and Archaeological Resources*

Policy 11). The County will protect structures and other features of historic significance in the context of their natural settings and will work with landowners to convey the historic value of the resource to the community at large. Structures and other features of particular historical significance will be retained, restored, or utilized in adaptive reuse (*Revised General Plan, Chapter 5, Historic and Archaeological Resources Policies, Historic and Archaeological Resources Policy 8*).

The application includes a Phase 1 archaeological survey for the subject site. The CDP identifies several areas of identified archaeological and historic resources. Staff's review of historic resources on the subject site will be sent under separate cover.

C. SITE DESIGN

1. Open Space

Within the Transition Policy Area, the Plan envisions that natural open spaces will be the predominant visual feature of the landscape and an enhancement to the area's river and stream corridors (*Revised General Plan, Chapter 8, General Policies, Policy 2*). All development within the Transition Policy Area will be clustered with 50 to 70 percent open space and the full implementation of the Green Infrastructure policies (*Revised General Plan, Chapter 8, Land Use Pattern, text*). The County envisions that the Lower Sycolin subarea will have a more rural character with lower densities and higher open space requirements than other subareas to facilitate a transition to the Rural Policy Area (*Revised General Plan, Chapter 8, Lower Sycolin and Middle Goose Subareas, text*). Within the Lower Sycolin subarea, at least 70 percent of the site will be maintained as open space (*Revised General Plan, Chapter 8, Community Design Policies, Policy 2*). The submitted applications do not contain enough information to evaluate whether the open space policies have been addressed.

Staff recommends that the applicant develop a well-connected open space system comprising 70 percent of the site area, encompassing and enhancing significant elements of the Green Infrastructure, and forming the predominant visual feature of the landscape.

Staff recommends that the applicant meet with County staff to discuss near-term and long-term opportunities and strategies for achieving and maintaining open space on the subject site and within the Lower Sycolin subarea over the life of the projects.

2. Greenways and Trails

The County is committed to establishing an integrated greenways and trails system that will be provided for hiking, walking, bicycle and equestrian use. Greenways include areas along rivers and streams that are often ideal for trails (*Revised General Plan, Chapter 5, Greenways and Trails, Policies, Policy 1*). The County envisions the construction of a series of trails and trail extensions as part of selected trail master planning efforts (*Revised General*

Plan, Chapter 3, Parks, Recreation, and Community Services, text) including public access trails along designated sections of Goose Creek (Revised General Plan, Chapter 5, Scenic Rivers and Potomac River Policies, Policy 9).

Staff recommends that the applicant coordinate with Parks, Recreation, and Community Services Department (PRCS) for opportunities to develop a trail network along the Goose Creek.

3. Noise

The County uses a Quarry Notification Overlay District to provide notice to residential property owners about the potential noise levels generated by neighboring quarry operations which may include blasting and the operation of equipment. Quarry operations are limited to certain hours of operation in an effort to minimize potential noise impacts (Revised General Plan, Chapter 5, Aural Environment text). Disclosure is the primary means to inform adjacent property owners of the presence of extractive operations and to ensure compatibility between uses.

Staff recommends that the applicant explore the scope and the scale of existing and future quarry operations to ensure that residences will not be adversely impacted by noises generated from the proposed use.

4. Lighting

The Plan promotes sound night-lighting standards that will “reduce light pollution such as glare, energy waste, light trespass, and the deterioration of the natural nighttime environment” (Revised General Plan, Chapter 5, Lighting and Night Sky, Policy 1).

Staff recommends that the applicant provide information regarding the proposed lighting. Staff recommends that the applicant commit to lighting that is fully shielded, provides a glare-free environment, is confined to the site, and is turned off after operational hours, unless required for safety or security purposes, and that illumination levels will be no greater than necessary for a light’s intended purpose. All lighting should be mounted as low as practicable and designed to preclude light trespass onto adjoining properties, glare to passersby, skyglow, and deterioration of the nighttime environment.

RECOMMENDATION

The proposed rezoning of the subject site for use as a quarry and water treatment facility may be reasonable given the location of the subject site within the Transition Policy Area and proximity to other mineral extractive and industrial land uses. However, staff requests additional information pertaining to impacts to environmental features and site design to fully evaluate the application and its conformance with Plan policies.

cc: Julie Pastor, AICP, Planning Director
Cindy Keegan, AICP, Program Manager, Community Planning, via e-mail



ZONING ADMINISTRATION 2nd REFERRAL

DATE: July 15, 2010

TO: Jane McCarter, AICP, Project Manager

THROUGH: Marilee Seigfried, Deputy Zoning Administrator

FROM: Cindy Lintz, AICP, Zoning Administration

SUBJECT: ZMAP 2009-0003, SPEX 2009-0027, & SPEX 2010-0013
Luck Stone Corporation: Leesburg Plant

| | | | |
|--------------|------------------|--------------|-------------|
| LCTM: | /61/////////8/ | MCPI: | 151-16-0598 |
| | /61/////////10/ | | 152-36-1675 |
| | /61/////////9/ | | 152-25-5356 |
| | /61/////////9B/ | | 152-27-4798 |
| | /61/////////9A/ | | 152-26-8334 |
| | /61/////////20A/ | | 152-16-8431 |
| | /61/////////15/ | | 153-35-5865 |

The Zoning Administration has reviewed the second submission of the above referenced application and has the following comments:

ZMAP 2009-0003

Issues

1. Sections 3-1001 & 3-1002. The MR-HI district permits uses only to the extent they are compatible with resource extraction and contemplated as such in the Comprehensive Plan. Additionally, the Transition Policy Area discusses the importance of extractive industries and the water supply systems, but does not speak to all of the uses permitted in the MR-HI zoning district. In the Zoning Tabulations Sheet (sheet 9), note #2 includes all "MR-HI Uses." Given the policies of the General Plan, the road access proposed, and that this is land currently in the transition zone being transferred to an industrial intensive zone; staff suggests limiting the list through proffers of permitted and Special Exception MR-HI uses in order to prohibit those that would *not* be compatible with the transitional zone. Examples of such uses that would require a more intensive transportation and land use include: Warehousing facility; Manufacture, processing, fabrication and/or assembly, distribution of products; motor vehicle storage and impoundment; storage of empty solid waste vehicles and containers, etc.

Plat

1. Sheet 1, General Note #3 and all applicable locations, remove the "+/-" symbol in front of the acreage.
2. Sheet 1, General Note #13, Add a sentence that the project will comply with the standards set forth in Section 4-1500.
3. Sheet 1, General Note #17, reference Section 4-1800.
4. Sheet 1, General Notes, renumber the notes. Number 23 is missing.
5. Sheet 2 and other sheets where applicable, update neighboring property data. County Records shows MCPI #153-37-0418 is owned by Purnima Sareen, and MCPI # 153-27-7697 is zoned PD-IP & PD-OP.

6. Sheet 9, the second 5-1300 is a duplicate with incorrect information. Delete that section.
7. Sheet 11, along the western boundary, show the 200' structure setback per Section 3-1007(E)(3).
8. Sheet 11, 12, 14 and all other sheets where applicable, correct the spelling of Sycolin Road in the note. Also remove "until a ZCPA is approved. Refer to ZMAP 2009-0003 Proffers."
9. Sheet 11, 12, 14, simply label the open space, "open space per proffer 1B."

Draft Proffer Statement

1. Throughout the proffer statement there is reference to "Applicant", staff suggests designating the "Applicant"
2. Page 1, at the end of paragraph 1, staff suggests deleting the last sentence Section 6-1209(F) refers to substantial conformity.
3. Page 1 under Concept Development Plan, staff suggests changing the first sentence to "The Property shall be developed in substantial conformance with Sheet 1 and 10-12 of 16 of the Concept Development Plan of the plan set entitled "Luckstone Corporation: Leesburg Plant, Zoning Map Amendment Petition, Quarry D Extension" prepared by Dewberry dated June 1, 2009, and revised through May 5, 2010.
4. Page 2, staff suggests removing "The requested MR-HI special exception uses...and "Overburden Placement Area." This should be a condition of the Special Exception not with the rezoning.
5. Page 2, under "B Open Space Between Sycolin Creek and Cochran Mill Road (Route 653)", staff suggests changing the proffer to, "As shown on Sheet 11 and 12 of 16 of the Concept Development Plan, portions of the Property situated between Sycolin creek and Cochran Mill Road (Route 653) shall be kept in open space purposes as a "no-build" buffer area. With exception of the travel ways shown on the Concept Development Plan, no land development activities shall be permitted between Sycolin Creek and Cochran Mill Road (Route 653) except for agricultural uses, and forest/ tree maintenance in accordance with forestry and silvaculture practices approved by the County Urban Forester."
6. Page 2 under "C Open Space Along good Creek", staff suggests replacing the proffer with: "As shown on the Concept Development Plan Sheet 10 & 11 of 16, the PD-GI zoned portions of the Property will be kept as open space as a "no-build" buffer area. No land development activities shall be permitted in the PD-GI zone except for agricultural uses, and forest/ tree maintenance in accordance with forestry and silvaculture practices approved by the County Urban Forester."
7. Page 2, under "D. Existing Undisturbed Forested Areas" staff suggests inserting "of 16" after "...Sheets 10, 11 and 12..."
8. Page 3, under "E. Restricted Use of Route 653", staff suggests inserting both the name of the road and the route number for both roads, "Gant Lane (Rt. 652) & Cochran Mill Road (Rt 653)" in the title of this proffer and within the proffer.
9. Page 3, under "E. Restricted Use of Route 653", staff suggest changing the SPEX XXXX-XXXX to SPEX-2010-0013.
10. Page 4 under "A Proffer Fulfillment and Indemnification of Parties." Luck Stone cannot be solely responsible unless they are the sole owner of the property being remapped. Revise accordingly.
11. SPEX plat 2009-0027 (Sheet 1, note #26) references widening of Gant Lane. Staff suggests adding a proffer to address this dedication.
12. Staff requests the opportunity to review the proffers again.

SPEX 2009-0027, Quarry Use

Issue

1. Parcel 61/9A (PIN 152-26-8334), owned by the Town of Fairfax, should be included as part of this application, since approximately 1/3 of the property is delineated in the shaded vicinity map. Update the table below the vicinity map, the owners' information, General Note #1, and the Statement of Justification. Note: currently the acreage is incorrect, however, with the addition of the above parcel, the acreage could be correct. Staff will check this at next submission.

Plat

1. Throughout the plat, remove the "+/-" before the acreage.
2. General Note #5, per Section 3-1003(GG), include in the note "when conducted on the same property" after "Crushing, treating, washing and/or processing of materials, accessory to a quarry operation".
3. General Note #11, include "Section 4-1500."
4. General Note #26, update the note to 'SPEX 2010-0013'.
5. Sheet 1, the table under the Vicinity Map, correct the PIN number for parcel 61-15 (PIN: 153-35-5865).
6. Sheet 1, under Sheet Index, delete 1:500 after Sheet 3 "Aerial Overlay" to have consistent titles.
7. Sheet 4 & 5, label the limits of SPEX to be consistent with the vicinity map.
8. Sheet 8, update note #2 to include SPEX 2010-0013.

Statement of Justification

1. As noted above, include parcel 61/9A (PIN 152-26-8334) in the discussion for the SPEX.
2. Sheet 3, in the paragraph above the table, there are six properties not five.
3. Sheet 6, the second paragraph, "Luck Stone is also proposing that the western boundary of the quarry pit wall be automatically permitted to extend west in the future should property to the west become zoned MR-HI or PD-GI". A new SPEX and possibly ZCPA will need to be processed for expansions to the quarry.

Conceptual Description of Proposed Operations & Evaluation of Feasibility of Operations without Hazards or Damage to Other Properties

1. Page 3, Clarify the triggers for the monitoring of both surface water and groundwater – when will this start?
2. Page 3, for long term groundwater monitoring, seismic monitoring program and land-disturbing activities, clarify when will these activities start, who does the report go to and how often will they be monitored?

Other

1. Staff requests reviewing the SPEX conditions.
2. Staff suggests requesting an extension to the validity of the SPEX. This should be included in the SPEX conditions.

**SPEX 2010-0013, Tunnel
1st Referral**

Plat

1. In the title, title bar, vicinity map, General Note #4 change SPEX 2010-XXXX to SPEX 2010-0013.
2. General Note #4, remove the "+/-" before the acreage.
3. General Note #5, since the acreage of each parcel is included, change "property" to "the Special Exception area is currently zoned MR-HI (21.97 AC) and PD-GI (8.80 AC) subject to the Revised 1993 Loudoun County Zoning Ordinance. The PD-GI portion is proposing to be remapped to MR-HI with ZMAP-2009-0003."
4. General Note #10, include per Section 4-1500.
5. General Note #15, the 300' no-build buffer is only shown on the tunnel area not all along the Goose Creek. Expand this to all of Goose Creek.
6. The table below the Vicinity Map, under Proposed Zoning, remove ZMAP 2009-0004.
7. Per Section 6-1300(G), (H), (M), & (N), staff defers to the Environmental Review Team (ERT).

COUNTY OF LOUDOUN
DEPARTMENT OF BUILDING AND DEVELOPMENT
ZONING ADMINISTRATION REFERRAL

DATE: December 17, 2009

TO: Nicole Steele, LEED AP, Project Manager, Department of Planning

THROUGH: Marilee L. Seigfried, Deputy Zoning Administrator

FROM: Amy Lohr, Planner, Zoning Administration

**TAX MAP/
PARCEL NUMBER (PIN):** ZMAP 2009-0003: 61/9 (152-25-5356) & 61/10 (152-36-1675)
ZMAP 2009-0004: 61/15 (153-35-5865)

CASE NUMBER AND NAME: ZMAP 2009-0003, Luck Stone Quarry
ZMAP 2009-0004, Loudoun Water and Luck Stone Quarry
FIRST REFERRAL

Staff has reviewed the referenced **rezoning (ZMAP)** applications to include the materials identified on the transmittal sheet dated September 2, 2009. Parcels 61/9 and 61/15 are currently zoned Transitional Residential-10 (TR-10). Parcel 61/10 is split-zoned TR-10 and Joint Land Management Area-20 (JLMA-20). All parcels are subject to the Revised 1993 Loudoun County Zoning Ordinance.

ZMAP 2009-0003 proposes to rezone approximately 181.19 acres to the Mineral Resource-Heavy Industry (MR-HI) zoning district and 5.04 acres to the Planned Development-General Industry (PD-GI) zoning district. ZMAP 2009-0004 proposes to rezone approximately 163.68 acres to MR-HI zoning district and approximately 4.69 acres to the PD-GI zoning district. The following issues have been identified.

A. CRITICAL ISSUES

1. **Section 3-1001, Purpose.** The MR-HI district permits uses only to the extent they are compatible with resource extraction. On the concept development plan (sheet 5) for ZMAP 2009-0004, the future 50-acre parcel intended for use by Loudoun Water as a water treatment plant is labeled "MR-HI Uses." Given the existing TR-10 zone allows water treatment plant by special exception, staff suggests the uses for ZMAP 2009-0004 be limited to stone quarrying, water treatment plant and other related by-right or special exception uses from the MR-HI district use lists. Staff believes a Zoning Concept Plan Amendment is appropriate for development of uses other than those currently anticipated by the applicants due to the extensive use lists in MR-HI district and the limited ability to serve the property via Gant Lane.

2. **Section 4-601, Purpose.** The PD-GI district is intended primarily for development of medium industrial uses. Given their size and arrangement, the proposed PD-GI districts will be vacant, unusable land, which is not consistent with the district purpose. The 5.04-acre and 4.69-acre PD-GI districts are proposed along the eastern edge of the parcel boundaries to lessen setback requirements between the proposed quarry use in the MR-HI district and the adjoining TR-10 district. [Section 3-1007(E) requires the pit wall of a quarry to be located a minimum of 1,000 feet from the MR-HI district boundary, except that, when a quarry is adjacent to the PD-GI or CLI zoning districts, the setback may be reduced to 50 feet.] While the rezoning of land to PD-GI in this fashion is technically permitted, staff finds that such rezoning is counter to the intent of Section 3-1007(E) to distance the pit wall from surrounding non-compatible zones, thereby lessening negative impacts. In this case, the TR-10 zoned properties (all owned by the City of Fairfax) are afforded substantially less protection than would otherwise be provided. If possible, these parcels should be included in the rezoning to PD-GI or MR-HI. If this cannot be accomplished, staff suggests a 200-foot setback be imposed, similar to the requirements of Section 4-607(H). In any event, it should be made clear to the Planning Commission and Board of Supervisors that the PD-GI remapping effectively reduces a 1,000-foot setback to 50 feet.
3. **Section 4-602, Size and Location.** Per sheet 4A of ZMAP 2009-0004, an incremental and contiguous addition of 4.69 acres is proposed to an existing PD-GI district (on parcel 61/21). Incremental additions must demonstrate their relationship and compatibility with the previously approved PD-GI district. The applicant needs to address this criterion for remapping. As the proposed district seems to have little relationship to the existing district, staff recommends the district size simply be increased to 5 acres. Alternatively, the applicant may also seek a modification to the district size pursuant to Section 6-1504. As a final matter, the 4.69-acre rezoning to PD-GI cannot be considered an incremental and contiguous addition to ZMAP 2009-0003 (as stated in the note on sheet 4A) because ZMAP 2009-0003 is not an existing PD-GI district. Revise sheet 4A accordingly.

B. OTHER ISSUES

1. **Section 6-1211(E)(1) - *Whether the proposed zoning district classification is consistent with the Comprehensive Plan.*** The majority of the rezoning area (98%) is planned for transition land use, with the remaining minimal acreage planned for keynote employment land use. Zoning staff defers to Community Planning for comment on consistency with the Revised General Plan.
2. **Section 6-1211(E)(3) - *Whether the range of uses in the proposed zoning district classification are compatible with the uses permitted on other property in the immediate vicinity.*** The range of uses permitted in the MR-HI and PD-GI districts is generally compatible with the uses permitted to the north, but is generally not compatible with the uses permitted in the surrounding TR-10 districts to the east and west.
3. **Section 6-1211(E)(5) - *The effect of the proposed rezoning on the County's ground water supply.*** In response to this consideration, both statements of justification reference the implementation of low impact development techniques. Staff recommends commitment to

the utilization of low impact development techniques in the proffer statement for ZMAP 2009-0004 or in the conditions of approval for the companion special exception for Loudoun Water's water treatment plant (SPEX 2009-0021).

4. **Section 6-1211(E)(6)** - *The effect of uses allowed by the proposed rezoning on the structural capacity of the soils.* According to County Records, hydric soils (types 6A, 66A, and 69A) are present in the rezoning area and the applicant has identified wetland areas. Development of the site should consider these areas with respect to grading and the construction of buildings and infrastructure.
5. **Section 6-1211(E)(7)** - *The impact that the uses that would be permitted if the property were rezoned will have upon the volume of vehicular and pedestrian traffic and traffic safety in the vicinity and whether the proposed rezoning uses sufficient measures to mitigate the impact of through construction traffic on existing neighborhoods and school areas.* In regard to ZMAP 2009-0003, future access to the site is not clearly articulated on the concept development plan (sheet 6). Staff questions whether the applicant will utilize Gant Lane or whether access to the site will be strictly from parcel 61/6 to the north. In regard to ZMAP 2009-0004, the plat (sheets 3, 5, 6, 9, and 10) illustrates a C3 private access road to serve Loudoun Water's future 50-acre parcel. Please be advised that amendments to the Facilities Standards Manual (FSM) were adopted on November 9, 2009. Ensure that the subject roadway meets current FSM standards. Staff defers to the Virginia Department of Transportation (VDOT) and the Office of Transportation Services (OTS) for further comment on this issue of consideration.
6. **Section 6-1211(E)(9)** - *The effect of the proposed rezoning on the environment or natural features, wildlife habitat, vegetation, water quality and air quality.* Staff suggests the proffer statement(s) include provisions for the 300-foot buffer adjacent to Goose Creek and the 50-foot RSCOD buffer adjacent to Sycolin Creek. Further, County Records indicate approximately 278 acres of forest cover (wooded area) within the subject parcels. In addition to the Goose Creek and RSCOD buffers, staff recommends other areas of on-site tree preservation be identified if possible. Staff defers to the Environmental Review Team (ERT) for further comment on the impact to the environment or natural features, wildlife habitat, vegetation, water quality and air quality.
7. **Section 6-1211(E)(16)** - *The effect of the rezoning on natural, scenic, archaeological, or historic features of significant importance.* There are a number of identified archaeological sites noted on the ZMAP plats, some of which are located within the limits of development. In the statements of justification, expand the response to address these sites and whether any preservation is to occur. Staff defers to Community Planning for additional comment on the impact to archaeological or historic features.
8. **Section 6-1500, Rezoning to Planned Development (PD) Districts.** Both ZMAPs seek rezoning to the PD-GI district. Each ZMAP shall provide a Concept Development Plan meeting the requirements of Section 6-1500. Revise ZMAP 2009-0003 (sheet 6) to address Sections 6-1508(A), (D), and (E). Revise ZMAP 2009-0004 (sheet 5) to address Section 6-1504 and Sections 6-1508(A), (E), and (F).

9. **Section 3-1002, Size and Location.** The minimum district size for a new MR-HI district is 600 acres. Contiguous additions of not less than 10 acres are allowed when approved pursuant to Section 6-1200. Therefore, approval of ZMAP 2009-0004 must occur concurrently with ZMAP 2009-0003, or following the approval of ZMAP 2009-0003.
10. **Section 3-1005, Yards.** No structure or use shall be located within 50 feet of any property line. To meet this section, the applicant will need to consolidate parcels 61/9 and 61/10 to eliminate the internal lot lines. The active BLAD application (BLAD 2009-0031) does not include parcel 61/10.
11. **Section 4-1500, Floodplain Overlay District.** Road crossings are permitted in the major floodplain, subject to Section 4-1508, Alterations. Staff notes that improvements to Gant Lane may require a floodplain alteration.
12. **Section 5-1300, Tree Planting and Replacement.** Site plans shall include the planting and replacement of trees to the extent that, at maturity of ten (10) years, a minimum tree canopy of 10% is provided. The requirements of this section should be noted on both ZMAP plats.
13. There are numerous acreage and other discrepancies between the statements of justification and the ZMAP plan sets. While Staff has attempted to identify these discrepancies, it is ultimately the applicant's responsibility to ensure that the applications are accurate and consistent.
14. Two statements of justification have been provided. It seems that the statement of justification titled "for Luck Stone Corporation (In Whole) Loudoun Water (In Part)" supports both ZMAP 2009-0003 and ZMAP 2009-0004, whereas the statement labeled "Zoning Map Amendment Application for Parcel A (formerly Parcel 15)" is only for ZMAP 2009-0004. If so, please clarify the titles of the statements to indicate the relevant ZMAP(s).
15. The Loudoun County Board of Supervisors has adopted an intent to amend County ordinances and policies to implement certain portions of the Chesapeake Bay Preservation Area Designation and Management Regulations. Please be advised that the subject parcels may be impacted by these amendments.

C. ZMAP 2009-0003: PLAT NOTES/MISCELLANEOUS

1. Please review the boundaries of parcels 61/9 and 61/10 with the Office of Mapping and Geographic Information. The boundaries shown on the plat are not consistent with the Loudoun County Mapping System. In regard to parcel 61/9, County Records show Gant Lane bisecting the parcel whereas the plat shows Gant Lane as a 30-foot prescriptive easement within the property limits. In regard to parcel 61/10, County Records show a 0.04-

- acre noncontiguous portion of the parcel adjacent to Cochran Mill Road, which is not shown on the plat. Please resolve these discrepancies with the next submission.
2. County Records indicate that parcels 61/9 and 61/10 are currently in the Land Use Program. Staff questions whether the remapping will impact participation in the Land Use Program.
 3. There is an active site plan on parcel 61/10 for an outdoor recreation establishment. As this use is not permitted in the MR-HI district, the site plan will need to be approved prior to approval of this ZMAP in order for the use to be considered legally nonconforming.
 4. On the vicinity map on sheet 1 and on all plan sheets, as applicable, delineate and label the Ldn 60 one-mile buffer noise contour (Section 4-1400).
 5. In the table below the vicinity map on sheet 1, the acreage of parcel 61/10 is stated as 116.29 acres. This is inconsistent with the statement of justification (p. 2), which indicates 116.23 acres. The correct figure is 116.23 acres. Revise the table on sheet 1 and elsewhere in the plan set as necessary.
 6. In the table below the vicinity map on sheet 1, the acreage noted in the proposed zoning column is not consistent with the statement of justification (p. 2). For parcel 61/10, the acreage to be rezoned to MR-HI should be 112.65.
 7. In note 3 on sheet 1, revise the figure of 186.29 acres to 186.23 acres. Also, change 181.25 acres to 181.19 acres.
 8. In note 4 on sheet 1, change the word "filled" to "filed." Also, reference the proposed special exception by application number (SPEX 2009-0027).
 9. In note 5 on sheet 1, the noted MCPI # is not correct. It should be 153-35-5865. Also the word "Loudun" should be "Loudoun."
 10. In note 13 on sheet 1, remove the reference to the presence of minor floodplain. There is no minor floodplain within this ZMAP.
 11. In note 14 on sheet 1, insert the word "Very" at the beginning of the sentence. Likewise, in note 5 on sheet 3, revise to indicate the presence of very steep slopes and moderately steep slopes.
 12. In note 23 on sheet 1, change the phrase "will be not" to "will not be."
 13. In note 24 on sheet 1, also address the sewage treatment plant on parcel 61/10 identified as PSTP-1968-0222.
 14. In the legend on sheets 2, 6, and 7, revise the steep slope designations. Moderately steep slopes are 15% to 25% and very steep slopes are greater than 25% (as opposed to 15% to 24% and 25% and greater).
 15. On sheets 2, 4, and 6 through 8, in regard to PIN: 193-39-3665, the note reads "Possible PDGI/MRHI Per SPEX 2009-009." Change "SPEX 2009-009" to "ZMAP 2009-0005."
 16. On sheets 2, 4, and 6 through 8, change "Scenic creek buffer" to "Scenic creek valley buffer" to be consistent with the Ordinance.
 17. On sheets 4 and 6 though 8, change 181.25 AC to 181.19 AC.
 18. On sheet 5 in the zoning requirements tables and the overall site summary, change 186.29 AC to 186.23 AC. In the zoning requirements tables and the overall site summary, also change 181.25 AC to 181.19 AC. In the overall site summary, change the buildable area from 162.29 to 162.63 AC.
 19. On sheet 5 under Sections 3-1005 and 4-605, revise the provided lot size. Two lots are being rezoned, one is 116.23 acres and one is 70 acres.
 20. On sheet 5 under Section 3-1006, provided lot coverage is "50% Miniumum." This should

- be 50% maximum, consistent with the Ordinance.
21. On sheet 5 under Section 3-1006, provided building height, line 3, is "over 40' by Special Exception." This should read "over 120' by Special Exception."
 22. On sheet 8, in regard to the quarry limits shown on parcel 61/6, stone quarrying and related accessory uses are not permitted in the major floodplain.
 23. On page 1 of the statement of justification (title and section I. Description), reference is made to 353.23 acres. However, the total rezoning area of both ZMAPs is 354.60 acres. Revise page 1 accordingly.
 24. On page 2 of the statement of justification (table), change 4.68 ac to 4.69, to be consistent with the plat for ZMAP 2009-0004.
 25. On page 2 of the statement of justification (table), change MH-RI to MR-HI. Also, this should read: "parcels to be rezoned to MR-HI and PD-GI."
 26. On page 2 of the statement of justification (table), change the total parcels acreage to 354.60.

D. ZMAP 2009-0004: PLAT NOTES/MISCELLANEOUS

1. In the materials received by staff, minor special exception SPMI 2009-0006 is not included with ZMAP 2009-0004. Rather, SPMI 2009-0006 is attached to SPEX 2009-0021. Therefore, please remove all references to modifications and SPMI 2009-0006 from the plan set (see Sheet 1 title, sheet 4, and sheet 4A). Staff also suggests sheet 10 be removed, as this sheet pertains directly to modification of the type 4 buffer. Sheet 10 also contains inaccuracies regarding buffer yard types (the yard abutting Route 267 is a front yard, not a side yard).
2. Staff finds identification of the site as "Parcel A (Formerly Parcel 15)" confusing. County Records identify the site as Parcel 15 on Tax Map 61 and staff recommends the application materials be revised consistent with County Records.
3. Staff recommends the plat sheets be numbered 1 through 11 (as opposed to having a sheet 4A). Revise the sheet index on sheet 1 accordingly.
4. On sheet 1, review the address for Owner/Applicant (1). It is not consistent with County Records.
5. In note 8 on sheet 1, please remove the word "herein."
6. All utility distribution lines shall be placed underground per Sections 3-1007(D) and 4-607(G). Please revise note 10 on sheet 1 accordingly.
7. In regard to note 11 on sheet 1, also state that appropriate permits will be obtained from Loudoun County.
8. Revise note 14 on sheet 1 to also indicate compliance with the standards of Section 5-1508.
9. In note 14 on sheet 1 and in note 2 on sheet 2, insert the word "proposed" prior to "Limestone Overlay District."
10. On sheets 2, 3, and 5 through 10, an "Ex. Access Road" is shown in the southeast corner of the property. Staff questions the purpose of this access road and whether it is part of the ultimate development plan. Also, the road is within the 300-foot no build buffer.
11. On sheets 4 and 4A, in the title, please change "1993 Loudoun County Zoning Ordinance, As Revised" to "Revised 1993 Loudoun County Zoning Ordinance" to be consistent with sheet 1.
12. On sheet 4, list the requirements of Section 5-1002 separately from those of 5-1406.
13. On sheet 4, under the required column for Section 5-621(C), revise the word "shall" to

- “may.” Section 5-621(C) states “Such utilities may be accessed by private access easement.”
14. On sheet 4A, under the required column for Table 5-1414(B), review the stated information for type 2 and 3 buffers. The text that reads “Type Four (2)” should be “Type Two (2).” The text that reads “Type Four (3)” should be “Type Three (3).”
 15. Per sheets 5, 6, 9, and 10, the development area for future parcel A-2 is located between 100 and 550 feet west of the 300-foot no build buffer. Staff suggests commitment to this additional “no build” area in the proffer statement.
 16. Page 1 of the statement of justification indicates that the future quarry use will not utilize Gant Lane for vehicular access. This should be included in the proffer statement for the subject applications or the conditions of approval for SPEX 2009-0027.
 17. On page 2 of the statement of justification, under the column of Loudoun Water as Applicant, for Parcel A, add reference to SPMI 2009-0006.
 18. On page 2 of the statement of justification, under the column of Luck Stone as Applicant, for Parcel 10, change 122.65 acres to 112.65.
 19. On page 2 of the statement of justification, for parcel 29, the SPEX application area should be 33.68, not 33.77.
 20. On page 2 of the statement of justification, under the column of Loudoun Water as Applicant, for Parcel 29, add reference to SPEX 2009-0033 and SPMI 2009-0009.
 21. In regard to the raw water intake and pumping station at the Potomac River (pages 3 and 4 of the statement of justification), staff notes that County site plan approval is required in addition to the referenced State and Federal Permits.

DEPARTMENT OF BUILDING AND DEVELOPMENT

COUNTY OF LOUDOUN

MEMORANDUM

DATE: July 12, 2010

TO: Marchant Schneider and Jane McCarter, Department of Planning
W

FROM: William Marsh, Environmental Review Team Leader

CC: Amy Lohr and Cindy Lintz, Zoning Administration
Joe Gorney, Pat Giglio, and Judi Birkitt, Department of Planning
Alex Blackburn, Gerard Sossong, Dennis Cumbie, Building and Development

SUBJECT: SPEX-2009-0027 and SPEX-2010-0013 Luckstone Quarry Expansion and Tunnel; SPEX-2009-0021, SPMI-2009-0006, and CMPT-2009-0007 Loudoun Water Treatment Plant; ZMAP-2009-0003 and -0004 Loudoun Water/Luckstone

The Environmental Review Team (ERT) met with the applicants on June 10, 2010, to discuss these applications. Because these cases are inter-related (with possible effect on a related power plant application), case comments are combined in one memo beginning with comments that apply to all the cases. ERT offers the following comments:

General Comments

1. Staff recommends collaboration with Loudoun Water, LuckStone, Green Energy Partners, and to the Town of Leesburg to coordinate location of utility lines supporting the Loudoun Water project and any extension from the Town of Leesburg waste water facility that is related to a power plant application. Locating any proposed reclaimed water utility along the proposed road connecting Cochran Mill Road and Gant Lane may be an option worth considering. County staff is available to facilitate a joint meeting of all parties if requested.
2. The long term, significant net loss of green infrastructure due to both applications is an unresolved concern. Neither applicant has committed to any reforestation or other habitat enhancement to compensate for lost forest canopy and disturbed or fragmented habitat, beyond meeting minimum requirements for federal and state permits.

SPEX-2009-0027 and SPEX-2010-0013 Luckstone Quarry Expansion and Tunnel

3. Staff has reviewed a plan for the proposed tunnel under Goose Creek. Due to the fact that Goose Creek will be flowing on what is essentially a man-made aqueduct, staff recommends that a contingency plan be worked out with the applicant to enable the base flow of Goose Creek to be sustained if there is a collapse or significant fractures of the proposed tunnel. Staff further encourages consideration of a flow gage on Goose Creek to monitor base flow downstream of the tunnel, which could be used as a measure to activate the contingency plan.
4. Attached is correspondence from September 2006 indicating the presence of wood turtles on or near the project area. This correspondence may not have been taken into account with the June 10, 2010, wood turtle habitat evaluation. Staff recommends that the applicant coordinate with state agencies like the Department of Environmental Quality (DEQ), Department of Conservation and Recreation (DCR), and Department of Game and Inland Fisheries (DGIF) about this correspondence. Staff also supports the recommendations on page 2 of said correspondence.
5. Regarding existing and proposed road crossings of Sycolin Creek:
 - Staff recommends a condition of approval for removing the existing, low water crossing of Sycolin Creek in conjunction with completing the proposed crossing that connects Cochran Mill Road to Gant Lane.
 - As depicted, the proposed road crossing will disturb mature, hardwood forest canopy, leaving a pocket of canopy in the floodplain between the road crossing and the electric transmission line. Staff recommends the following: depict proposed intersections with Cochran Mill Road and Gant Lane completely outside of the transmission easement on the concept development plan to avoid possible easement conflicts. Second, adjust the road alignment to align with or encroach into the eastern edge of the transmission easement.

The intent of these recommendations is to respect existing easements while also minimizing net loss and fragmentation of green infrastructure.

6. Staff recommends a condition of approval for turbidity testing of runoff leaving erosion and sediment control structures after storm events. If turbidity levels exceed 280 nephelometric turbidity units (ntu), appropriate measures will be taken at sediment basins and traps to lower the ntu level. This recommendation is consistent with standards agreed to by Green Energy Partners (SPEX-2009-0009).

ZMAP-2009-0003 and -0004 Loudoun Water/Luckstone

7. Staff encourages both applicants to consider habitat enhancement within lightly forested areas of the Sycolin Creek major floodplain located between Gant Lane

and the Washington and Old Dominion trail crossing. As previously noted, staff commends Luck Stone for plans to restore the Sycolin Creek channel and overbank adjacent to the trail crossing. Implementing this recommendation would help address general comment 2.

SPEX-2009-0021, SPMI-2009-0006, and CMPT-2009-0007 Loudoun Water Treatment Plant

8. Please amend notes regarding the 300-foot no building buffer to reference the Facilities Standards Manual (FSM), per FSM Section 5.320.D.7.a.
9. Staff is unable to evaluate Revised 1993 Loudoun County Zoning Ordinance (ZO) Section 6-1310(H), whether the water treatment plant location with related infrastructure like raw water utilities and connecting roads will damage existing animal habitat, vegetation, and water quality. It is staff's understanding that the treatment plant's and associated utility line's impacts on animal habitat and vegetation will not be quantified until after the county's consideration of these land use applications. After consideration, a Joint Permit Application would be filed that details these impacts. Staff respectfully requests more detail on habitat impacts prior to consideration by the Planning Commission.
10. Because storm runoff from the proposed use would empty into the Goose Creek reservoir close to the drinking water intake, staff recommends the following conditions of approval for temporary and post-construction stormwater management:
 - Runoff leaving erosion and sediment control structures will be tested for turbidity after storm events. If turbidity levels exceed 280 nephelometric turbidity units (ntu), appropriate measures will be taken at sediment basins and traps to lower the ntu level.
 - Post-construction stormwater management will prevent the post-development peak discharge rate and volume from exceeding the pre-development peak discharge rate and volume for the 1- and 2- year, 24-hour design storms.
 - Post-construction stormwater quality measures will capture and treat runoff from 90% of the average annual rainfall (a 1-inch event in humid watersheds like Virginia) using Best Management Practices that are capable of removing 80% of the average annual post-development total suspended solids.

The first recommendation is consistent with standards agreed to by Green Energy Partners (SPEX-2009-0009). The latter two recommendations are based on stormwater credits in LEED that are more recent and rigorous than recommendations in the Goose Creek source water protection strategy. These recommendations do not substitute for other water quality requirements in the

FSM, Section 1096 of the Codified Ordinance, or any state or federal regulation that are more stringent.

11. Note 3 on sheet 4 on the special exception plat indicates that sewer service will be extended to the treatment plant. Staff requests a depiction on the plat of the extension alignment, along with depicting the finished water utility's crossing of Goose Creek.
12. Staff recommends attenuation of the noise produced by the proposed generator to ensure that adjacent parcels are not adversely affected, in order to address ZO Section 6-1310(C).
13. It is staff's understanding that the raw water utility line from Quarry A to the water treatment plant will not require a pump station. To minimize disturbance to green infrastructure, staff recommends a condition of approval that prohibits placing a pump station in this area.

Staff is available to answer any questions.



September 22, 2006

VIA EMAIL: shahn@lansdownedev.com

Mr. Steve Hahn, P.E.
Lansdowne Town Center, LLC
19112 Xerox Drive
Lansdowne, VA 20176

Re: Wood Turtle (*Glyptemys insculpta*) at
Ridgewater Park, Loudoun County, Virginia
WSSI #11241.02

Dear Mr. Hahn:

In 2004, Wetland Studies and Solutions, Inc. (WSSI) performed an Endangered and Threatened Species Habitat Evaluation and Rare Plant Species/Community Assessment for the Ridgewater Park (formerly known as Creekside Assemblage) site. As described in WSSI's ETS habitat evaluation report dated November 8, 2004, WSSI identified potential habitat for the state-threatened wood turtle (*Glyptemys insculpta*) along Sycolin Creek in the northern portion of the site. No wood turtles were observed at the time of WSSI's ETS habitat evaluation field work. Recently, however, we have gotten requests (on other projects in Loudoun County) from DGIF to conduct detailed searches for this species. Wood turtle searches are generally conducted during the winter months because that is the time that the turtles are hibernating in the streams and are most easily located. This species has become a big issue in several projects this summer, and we are alerting you to the issue so we can take proactive measures to address it now.

In addition to DGIF's recent interest in this species in Northern Virginia, we are concerned because during the summer of 2005, while survey-locating WSSI's wetland delineation flagging, WSSI surveyors located a turtle of unknown species near Sycolin Creek in the northern portion of the site. Months later, WSSI surveyors forwarded photographs of the turtle to WSSI biologists who confirmed that the turtle was, in fact, a wood turtle. Two photographs of the wood turtle found at the Ridgewater Park site are attached. Several photographs of wood turtles found in Maryland are also attached for comparison.

Review of the Virginia Department of Game and Inland Fisheries' (DGIF) Fish and Wildlife Information Service (FWIS) database indicates that there are no known documented occurrences of the wood turtle anywhere in the Sycolin Creek watershed, and WSSI is not aware of any documented records of wood turtle within the Sycolin

Creek watershed contained in the Department of Conservation and Recreation's (DCR) database. Because of the absence of previously documented wood turtle records in the Sycolin Creek watershed, DCR and DGIF will likely consider this an important find.

The Virginia Department of Environmental Quality (DEQ) considers impacts to state-listed ETS, through consultation with the DGIF and the DCR during its wetlands permitting process. The DEQ may require searches for listed species if they determine that their issuance of a wetlands permit or waiver could result in adverse impacts to ETS. Because the presence of a state-listed species has been documented on the site, the DEQ will likely require implementation of measures to avoid and minimize adverse impacts to the species prior to issuing a wetlands permit. In order to avoid potential project delays associated with the wood turtle, we recommend that you proactively address the issue as follows:

- Authorize WSSI to provide documentation of this wood turtle record to the DCR and the DGIF.
- Perform a winter-time (December through mid-March) search to document if wood turtles hibernate within the portion of Sycolin Creek located on the project site. Wood turtle searches are generally conducted during the winter months because that is the time that the turtles are hibernating in the streams and are most easily located.
- Where practicable, locate any in-stream work (*i.e.*, road and utility crossings) in areas that do not provide high-quality hibernation habitats.
- In the wetlands permit application, incorporate the mitigation measures typically recommended by the DGIF for projects located in areas where wood turtles are known or suspected to occur in order to minimize potential adverse impacts to this species. Such mitigation measures typically include the following:
 - Placement of a time-of-year restriction on all in-stream work so that work within the stream occurs during the summer/early fall low-flow period when wood turtles are not hibernating in the stream;
 - Implementation of and strict adherence to erosion and sediment control measures in accordance with state and local regulations to minimize adverse impacts to the aquatic environment,
 - Use of bridge spans, bottomless culverts or culverts countersunk at least six inches below the streambed to prevent barriers to the migration of aquatic organisms and allow them to pass through the culvert;

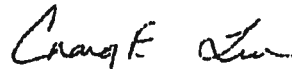
- Performance of searches for individual wood turtles within the limits of clearing before the initiation of any construction in areas of suitable habitat and relocation of any wood turtles found during the search; and
- Provision of educational materials to contractors working in areas of potential wood turtle habitat to make them aware of the possibility of wood turtles on the site and familiarize them with the species' appearance, status and life history.
- Initiate consultation with the DGIF to determine if other mitigation measures are required to minimize impacts to the species.

Notifying the appropriate agencies of the occurrence of the wood turtle up-front and incorporating measures to minimize impacts to the species into the proposed project, as outlined above, will likely satisfy the conditions of the state wetlands permit and minimize comments and associated delays from the agencies during their review of the wetlands permit application. These measures will likely also satisfy the concerns that the Loudoun County Department of Planning may raise with regard to ETS in their review of your rezoning application.

If you would like WSSI to further investigate the presence of the wood turtle on the Ridgewater Park site and provide a proposal to conduct a search for the wood turtle, please contact either Dan Lacey or myself at 703-679-5600.

Sincerely,

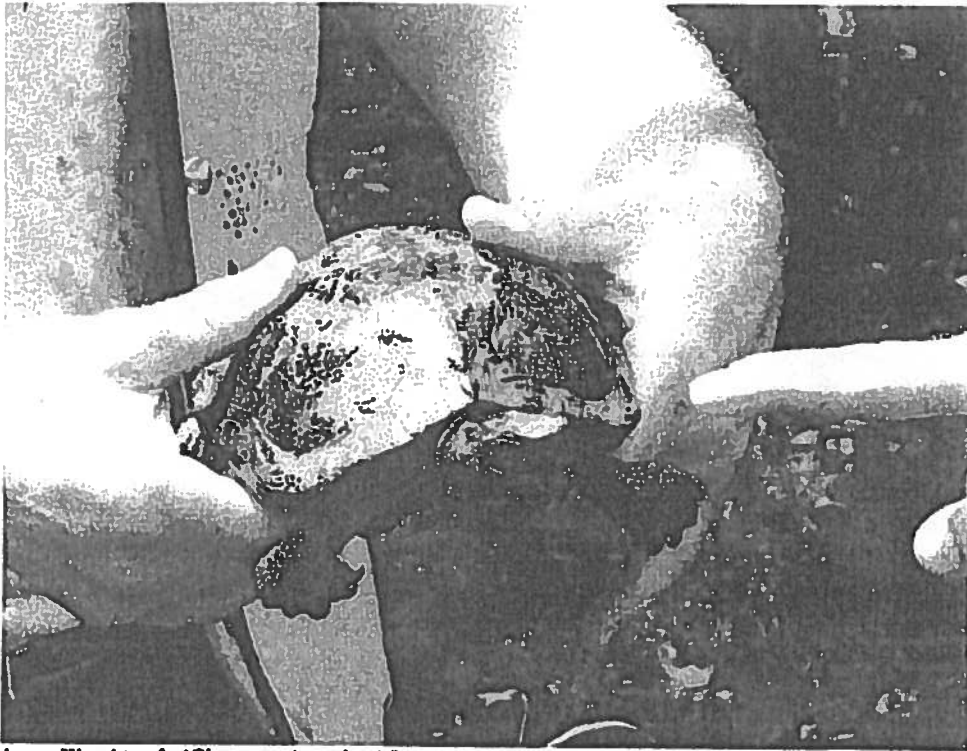
WETLAND STUDIES AND SOLUTIONS, INC.



Craig E. Tumer, PWS, PWD
Principal Environmental Scientist

Enclosure

**WOOD TURTLE PHOTOS
RIDGEWATER PARK
WSSI #11241.02**



1. Wood turtle (*Glyptemys insculpta*) found on the Ridgewater Park site by WSSI surveyors in the summer of 2005. Note the rough shell with concentric grooves and ridges, orange color on the forelegs and broad, paddle-like feet. The shell of this individual appears more worn than those pictured in Photos #3, #4, and #5, suggesting that this turtle may be a very old individual (wood turtles may live for 60 years or more).

**WOOD TURTLE PHOTOS
RIDGEWATER PARK
WSSI #11241.02**



2. Wood turtle found on the Ridgewater Park site by WSSI surveyors in the summer of 2005. Although the quality of the photo is not good, the low, relatively flat carapace, broad feet and long, broad tail are distinctive.

**WOOD TURTLE PHOTOS
RIDGEWATER PARK
WSSI #11241.02**

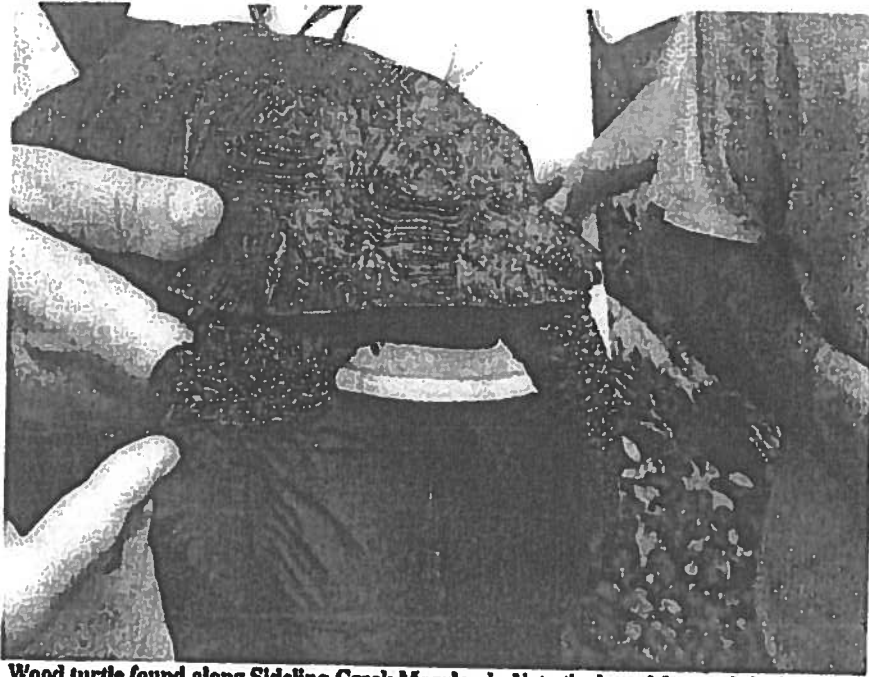


3. **Wood turtle found along Sideling Creek, Maryland. Note the similarity to the turtle pictured in Photo #1. Specifically, note the rough shell with concentric rings of grooves and ridges, the orange color on the legs and the broad, paddle-like feet.**



4. **Wood turtle found along Sideling Creek Maryland.**

**WOOD TURTLE PHOTOS
RIDGEWATER PARK
WSSI #11241.02**




5. Wood turtle found along Sideling Creek Maryland. Note the broad feet and the long, broad tail.

L:\11000A\11241.02\ADMIN\092106turtle.doc

County of Loudoun
Office of Transportation Services
MEMORANDUM

DATE: July 22, 2010

TO: Jane McCarter, Project Manager
Department of Planning

FROM: George Phillips, Senior Transportation Planner 

SUBJECT: ZMAP 2009-0003 Luck Stone Quarry
ZMAP 2009-0004 Loudoun Water and Luck Stone Quarry
SPEX 2009-0027 Luck Stone Quarry Expansion
Second Referral

SPEX 2010-0013 Proposed Tunnel
Initial Review

Background

In response to first OTS referral comments dated January 27, 2010, the Applicant has provided revised materials and responses for review. This review is based on materials received from the Department of Planning on May 12, 2010, including (1) a response letter from the Applicant's representative dated May 5, 2010, (2) a revised Statement of Justification dated May 5, 2010, (3) a draft proffer statement dated May 5, 2010, (4) a supplemental traffic statement for Cochran Mill Road (Route 653) dated May 7, 2010 from PHR & A, and (5) plan sets prepared by Urban Ltd. And Dewberry & Davis, LLC, both revised through May 5, 2010. This referral also reviews the first independent submission (SPEX 2010-0013) of the Applicant's proposed tunnel under Goose Creek.

Review of Applicant's Traffic Statement

The Applicant has submitted a supplemental traffic statement (provided as *Attachment 1*) for the proposed applications which considers a new private access road connection between Cochran Mill Road (Route 653) and Gant Lane (Route 652). This road would provide employee/service access to the west side of the Luck Stone facility, as well as primary access to the adjacent Loudoun Water Treatment Plant (proposed per SPEX 2009-0021). The connection to Route 653 (Cochran Mill Road) is located approximately 1,000 feet northeast of the Gant Lane (Route 652)/Route 653 (Cochran Mill Road) intersection (a location map is provided as *Attachment 2*). Construction of this road would involve a new crossing of the Sycolin Creek floodplain. OTS staff review of the supplemental traffic statement is as follows:

Trip Generation Information

The Applicant's traffic statement in *Table 1* estimates that Loudoun Water would generate 10 AM peak hour, 8 PM peak hour and 43 daily vehicle trips. *Table 2* provides the existing Luck Stone trips to and from Belmont Ridge Road (Route 659) with 152 AM peak hour, 58 PM peak hour and 1,717 daily vehicle trips. *Table 3* provides the Luck Stone trips at the proposed new employee/service entrance onto Cochran Mill Road (Route 653) (19 AM peak hour, 19 PM peak hour and 70 daily vehicle trips). The traffic statement also notes that no new trips will be generated by the quarry expansion as it will provide an extension of the design life of the Luck Stone Quarry, not increase traffic.

Future Traffic Volumes and Level-of-Service (LOS)

The Applicant's supplemental traffic statement provides year 2015 future traffic volumes with both Loudoun Water and Luck Stone traffic, in *Tables 4-6* and the intersection LOS in *Table 7*. The LOS analysis includes a review of the proposed unsignalized new access onto Cochran Mill Road (Route 653) under three scenarios (1) with Loudoun Water traffic only (2) with Luck Stone traffic only and (3) with both. The traffic statement indicates that all of the turning movements will operate at LOS A under each scenario during both peak hours.

Turn Lane Warrants

As summarized in Attachment C of the report, the supplemental traffic statement indicates that, based on right turn volumes, a separate right turn lane or taper is not required at the proposed Cochran Mill Road (Route 653)/ Luck Stone/Loudoun Water access road intersection.

Status of Transportation Comments

1. Initial Staff Comments (First Referral January 27, 2010): Clarification is needed regarding information in the applicant's traffic statement. First, in the trip generation table (*Table 1*), only the P.M. peak hour data was provided. Please provide the A.M. peak hour data for the quarry and clarify how the peak hour LOS was calculated. Second, it needs to be clarified how the existing peak hour count data provided in *Tables 3 and 4* relate to the trip generation table (*Table 1*). The numbers appear to be different. Third, *Table 3* includes P.M. peak hour count data for Luck Lane but does not provide the peak hour count data for Jackpit Lane and Builders Lane/Belmont Station Drive.

Applicant Response (May 5, 2010): The *Table 1* in the May 2009 TIA shows the trip generation for the P.M. peak for comparison to the VDOT 527 guidelines. The table is attached in a modified format to show the total A.M. and P.M. traffic volumes entering the Luck Stone sites west of Route 659 for existing conditions. As coordinated with Mr. George Phillips in October 2009, the *Table 3* turns were corrected to match the capacity analyses,

and is attached, for all three driveways. The Table 4 volumes were shown to determine heavy vehicle impacts at the primary intersection at Luck Lane.

Current Issue Status: The Applicant's traffic statement now includes the trip generation in the AM peak period traffic for the Luck Stone quarry in Tables 2 and 3, along with information as to how these figures were calculated. In addition, Table 8 shows the corrected turns and the peak hour counts for Jackpit Lane and Builders Lane. Issue resolved.

2. **Initial Staff Comments (First Referral January 27, 2010):** One page 2 of the applicant's traffic statement, it is noted that, for quarry uses on the parcels west of Goose Creek which are the focus of these applications, Luck Stone will transport rock material across Goose Creek on-site to the east side of Goose Creek for processing at the existing facility adjacent to Belmont Ridge Road (Route 659). No truck traffic for rock extraction operations is proposed via Cochran Mill Road (Route 653). Under the proposed special exception, the applicant proposes to construct a tunnel below the existing grade of Goose Creek rather than the approved conveyor belt bridge over Goose Creek (see *Attachment 4* in the first OTS referral). Please clarify that all employees and equipment accessing the parcels west of Goose Creek will not utilize Cochran Mill Road (Route 653) and Gant Lane (Route 652) and access exclusively via Belmont Ridge Road. Given the condition of Cochran Mill Road (Route 653) and Gant Lane (Route 652), OTS recommends that all vehicle access for the proposed quarry uses be via Belmont Ridge Road (Route 659) and stipulated in the rezoning proffers and/or special exception conditions. Also, the specific design of the proposed underground tunnel connection needs to be better understood, including its width and specific construction standards being applied.

Applicant Response (May 5, 2010): Access to the Subject Properties will be provided either via Belmont Ridge Road (Route 659) or Cochran Mill Road (Route 653), both of which have direct or secondary access to Route 7 to the north and the Dulles Greenway (Route 267) to the south. Under Proffer 10 and Condition 18 of ZMAP 1999-0004 and SPEX 1999-0006, respectively, Luck Stone is prohibited from using Cochran Mill Road (Route 653) for transporting quarried rock.

The volume of quarry-related truck traffic is directly tied to market demand and, since the proposed expansion of the quarry use will not increase the intensity of crushed stone production or the sales volume, and considering that market demand will not change as a result of the approval of this application, the quarry expansion will serve only to extend the functional life of the existing Leesburg Plant quarry operation while protecting the diabase assets with appropriate zoning entitlements. Accordingly, and as discussed in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, Luck Stone does not foresee additional business activity or any increases in vehicle trips by virtue of approval of ZMAP 2009-0003, ZMAP 2009-0004, or SPEX 2009-0027 over that which has been previously approved.

In conjunction with this request, Luck Stone has proposed a special exception to revise conditions 14 through 19 approved under SPEX 1990-0019 to permit a below-grade inter-quarry tunnel access road, rather than the approved conveyor/bridge, to serve as the primary connection between the approved and proposed quarries on the west side of Goose Creek and the existing Leesburg quarry and crushing operations on the east side of Goose Creek. This request was previously made in conjunction with SPEX 2009-0027; however, at the request of Staff, Luck Stone has agreed to segregate this request from the larger quarry request.

Luck Stone will utilize an existing farm lane and bridge on MCPI #151-16-0598 to begin the excavation of the inter-quarry tunnel below Goose Creek. The balance of MCPI #151-16-0598 will remain as open space until a superseding ZCPA is approved by the Board of Supervisors, and no transportation of quarried rock will occur through the farm lane or bridge.

Notably, SPEX 1990-0019 included the approval of one access point across Sycolin Creek along Cochran Mill Road, which was contemplated to be permanently used for emergency and intermittent access by approximately 10 employees, company maintenance vehicles, and supply vendors. In recent years however, Luck Stone has evaluated the feasibility of the approved crossing in light of recent stream mitigation efforts along Sycolin Creek, engineering costs, significant topographic challenges, as well as the future needs of Luck Stone's proposed quarry expansion by virtue of this application.

In consideration of these physical and environmental factors, Luck Stone now proposes that emergency and intermittent service access for the Subject Properties be provided via a private road constructed on a new alignment between Cochran Mill Road and Gant Lane. As shown on the Concept Development Plan, the proposed alignment will traverse the Sycolin Creek floodplain at its narrowest point. This new road, the location of which was selected to minimize disturbance of wetlands and floodplain, will provide emergency and intermittent service access for a maximum of 10 Luck Stone employees per day. As noted above, no transportation of quarried rock will occur through this access point. Luck Stone will not use any portion of Gant Lane for access.

Notably, the traffic analysis for SPEX 1990-0019, by Callow Associates, Inc., had conservatively estimated approximately 25 A.M. and P.M. peak directional trips turning to the Luck Stone access on Route 653, to provide maintenance and employee access to the properties west of the Goose Creek. These volumes exceed the anticipated activities, and could be accommodated with proposed access improvements in coordination with the pending Loudoun Water application.

In addition to assisting Luck Stone, the new permanent road will also provide improved access to the proposed water treatment plant for up to 20 Loudoun Water employees and an average of two trips per day for truck deliveries and service vehicles. The southern portion

of Gant Lane will continue to provide Loudoun Water employees access to the water treatment plant via the private road proposed on MCPI #153-35-5865 as noted in the submittal materials for ZMAP-2009-0004 and SPEX-2009-0021.

Current Issue Status: The Applicant has adequately clarified that the proposed private

street entrance on Cochran Mill Road (Route 653) will not be used for transporting quarried rock. The entrance will provide maintenance and employee access for Luck Stone as well as the proposed Water Treatment Plant and the amount of site traffic will be relatively low. OTS believes that the new road will provide improved access to the site by avoiding the existing substandard Gant Lane (Route 652) bridge crossing over Sycolin Creek. Please note, however, that the proposed new private road with entrances onto Cochran Mill Road (Route 653) and Gant Lane (Route 652) will require review and approval by the Department of Building and Development and VDOT and must meet applicable standards; further discussion of the design of the proposed road with these agencies is recommended by OTS. As noted in the OTS comments on the Water Treatment Plant (dated June 29, 2010), this road is recommended to be completed in time to allow for construction access to the water treatment plant.

3. **Initial Staff Comments (First Referral January 27, 2010):** On page 6 of the traffic statement, it is noted that the installation of a traffic signal at the Belmont Ridge Road (Route 659)/Luck Lane intersection will improve the Level-of-Service to LOS D but that it is not warranted based on the Manual on Uniform Traffic Control Devices (MUTCD) warrants. The applicant needs to provide the MUTCD warrant findings. Please note that the conditions from SPEX 1990-0019 (Condition #1) call for a signal contribution when warranted. In addition, CTP Policy states that LOS D or better be maintained. Further discussion is needed as to how this inadequate LOS can be improved.

Applicant Response (May 5, 2010): *Given that the current application proposes no additional trips on Route 659, Luck Stone proposes maintenance of the previous Condition #1 pursuant to the approval of SPEX 1990-0019. The recommendations from the Patton, Harris, Rust & Associates study were based on review of the A.M., midday, and P.M. peak periods traffic counts from May 2009. The supplemental worksheets submitted with this letter (Tables 7, 8a, and 8b) from the seven hour volumes, four hour peaks, and P.M. peak hour trips show that the existing conditions do not satisfy the MUTCD volume warrants at Luck Lane.*

Since the proposed use is not increasing traffic volumes, a full warrant study was not performed on Route 659. Note that for the multi-hour warrants the existing volumes on Route 659 and exiting Luck Lane only satisfy three out of the seven hours counted and no peak hour warrants are satisfied. For existing conditions, VDOT typically suggests installation based on satisfying an 8-hour volume warrant. Therefore, the signal installation may not be approved by VDOT. Adding a turn lane on Route 659 would improve turning

access, but it does not eliminate the side street level of service ("LOS") deficiencies, which are a function finding gaps in traffic to turn left to Route 659. Note that the overall intersection operations are at acceptable LOS "D" grades in the A.M. and P.M. peaks, and the LOS below "D" are associated with the existing side street left turns.

Current Issue Status: The applicant has adequately documented that peak hour warrants for a traffic signal are not met. However, no recommendations have been made which address the side street deficiencies (below LOS D) for left-turning site traffic onto northbound Route 659. In addition, OTS continues to recommend that the Applicant provide turn lanes on Route 659 into the site entrance at Luck Lane, subject to VDOT review and approval. See also Comment #4 below.

4. **Initial Staff Comments (First Referral January 27, 2010):** While a left-turn lane is warranted on northbound Belmont Ridge Road (Route 659) onto Luck Lane, the applicant notes that it is not recommended because the proposed uses are the same as the existing condition and that Belmont Ridge Road (Route 659) is programmed for realignment. Please note that the conditions from SPEX 1990-0019 (Condition #2) call for the installation of turn lanes at the site entrance in coordination with the "planned relocation and reconstruction of Route 659". However, Belmont Ridge Road (Route 659) is not anticipated to be improved in the near future. As a two-lane facility without turn lanes, the existing traffic accessing the quarry creates friction on Belmont Ridge Road (Route 659) which impedes through traffic flow. In addition, the potential for rear-end collisions is increased. The CTP calls for turn lanes at all intersections on Route 659. OTS recommends that right- and left-turn lanes be provided by the applicant on Route 659 at Luck Lane which meet VDOT standards.

Applicant Response (May 5, 2010): The previous conditions of approval associated with SPEX 1990-0019 reference the turn lanes only as part of the Route 659 widening. As with the signal installation, the improvements would provide a benefit to turns as well as facilitate Route 659 through volumes. Luck Stone anticipates that installation of separate left turn lanes on Belmont Ridge Road, to satisfy current VDOT design requirements at a 50 mile-per-hour design speed, would require significant turn lane transition lengths which extend south of the entrance off-site. Luck Stone is willing to coordinate with VDOT and has continued to be cooperative in providing adequate and safe access, but the proposed applications do not change the use and effective traffic volumes at the Luck Stone entrance on Route 659.

Current Issue Status: OTS understands that the previous conditions of approval for Luck Stone under SPEX 1990-0019 reference the provision of turn lanes only as part of the Route 659 widening. However, as previously noted, Route 659 is not anticipated to be widened in the near future, and the CTP calls for turn lanes at all intersections on Route 659. Therefore, OTS continues to recommend that right- and left-turn lanes be provided by the Applicant on Route 659 at Luck Lane subject to VDOT review and approval.

New Comment

5. Please confirm that the 35-foot ROW dedication and the provision of associated easements proffered with ZMAP 1999-0004 along the site's Cochran Mill Road (Route 653) frontage carry forward with the current applications.
6. **New Comment-SPEX 2010-0013 (Tunnel)**: OTS defers to the Department of Building & Development regarding technical review of the proposed tunnel under Goose Creek. OTS has no further comments on this matter.

Conclusion

The Office of Transportation Services has no recommendation at this time. A recommendation will be provided once the outstanding issues identified in this referral are addressed by the Applicant. OTS staff is available to meet with the Applicant for further discussion of these applications.

Attachments

1. Applicant's Supplemental Traffic Statement (May 7, 2010)
2. Location Map-Proposed Private Access Road from Cochran Mill Road to Gant Lane.

cc: Andrew Beacher, Acting Director, OTS
Lou Mosurak, Senior Coordinator, OTS

May 7, 2010

Mr. George R. Phillips, AICP
County of Loudoun
Office of Transportation Services
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, Virginia 20177-7000



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Re: Loudoun Water Parcel 15 Treatment Facility SPEX 2009-0021/ ZMAP 2009-0004; Luck Stone Quarry Expansion SPEX 2009-0027/ZMAP 2009-0003

**Supplemental Traffic Statement for Route 653 near Gant Lane
PHR+A 10348-2-0**

Dear Mr. Phillips:

Based on the County OTS and VDOT referrals for the subject applications, the owners and operators have considered several access alternatives for providing upgraded access to the properties north of the Dulles Greenway and east of Cochran Mill Road (Va. Route 653) in the vicinity of Va. 652 (Gant Lane). The revised applications for both SPEX and rezoning introduce a new private street connection to the public R-O-W to provide improved access over the Sycolin Creek floodplain to serve the 2 proposed uses. The connection to Cochran Mill Road is northeast of the Gant Lane interaction adjacent to the overhead transmission lines, and would curve through property owned by Luck Stone to connect to Gant Lane as a T. The road section is proposed as a private commercial entrance.

The following supplemental materials are provided to assess the access requirements for the new connection to the VDOT public street network. As discussed, the technical methodology was discussed with County OTS, as attached, and is intended to provide the projected traffic volumes for the individual uses and summarize the turn requirements for the public street connections. Previous materials are not repeated here, but are excerpted from the following resources, previously submitted to Loudoun County:

- PHR+A, letter to G. Phillips, "Hybrid Energy Park" dated September 3, 2009,
- PHR+A, letter to G. Phillips, "Luck Stone Quarry Expansion, Traffic Statement for Parcels 9, 10, 15," dated June 1, 2009,
- PHR+A, letter to G. Phillips, "Loudoun Water Parcel 15 Treatment Facility Traffic Statement, dated June 1, 2009, and
- Luck Stone Quarry Expansion, Traffic Statement for Parcels 9, 10, 15," dated June 1, 2009.
- Callow Associates, A Traffic Analysis of Luck Stone Quarry, April 1990, SPEX 1990-0019.



Overall, the access as proposed eliminates employees and service vehicles for the two applications from having to cross the existing narrow bridge on Gant Lane south of Route 653. Turn lane improvements are not warranted, and the proposed access will be able to satisfy VDOT commercial entrance standards for safe access connection to the existing Route 653 road section as an all-weather road. The effective traffic volumes are minimal, and can be accommodated with the entrance as proposed. In the case of the Luck Stone quarry activity expansions, the entrance is provided as an alternative access to the properties west of Goose Creek for employees and service/maintenance. The entrance is not proposed as truck access route for deliveries of stone materials; That function will continue to be provided via the Luck Lane access to Route 659. The analysis for those conditions are not repeated here, except for some table updates requested by County staff.

Uses

The site access for the Loudoun Water facility on a portion of Parcel 15 is proposed as a private road to the existing turn-around at the south terminus of Gant Lane. The proposed SPEX application by the Applicant (Loudoun Water) will include a facility for a maximum of 20 employees. Water Treatment Plant operations include truck deliveries limited to an average of 2 trips per day for materials/equipment and service.

Primary future access to the Luck Stone quarry activities will be provided by the proposed tunnel under Goose Creek. The Applicant will utilize the proposed tunnel for conveying rock and transporting regular service and passenger vehicles which are necessary to maintain, manage, and service the proposed quarry. Luck Stone is proposing a private access road between Cochran Mill Road and Gant Lane. This road, the location of which was selected to minimize disturbance of wetlands and floodplain, will provide emergency or intermittent access for a maximum of 10 employees per day (whose hours of work will be from 7:00 a.m. to 5:00 p.m.), company maintenance vehicles, and supply vendors.

Access

Luck Stone vehicles are not contemplated to use Gant Lane at Cochran Mill Road. Loudoun Water facilities will be serviced by the new private street connection (referenced here as "Luck Access") and an extension of Route 652 south of the existing cul-de-sac (Loudoun Water's "southern access road") to their facility. The connection to Route 653 is approximately 1000 feet northeast of the Gant Lane intersection. The location would provide adequate sight distance for access to Route 653 for the existing gravel road operations. The new 50 foot private access easement connects to back to Gant Lane approximately 1300 feet east of the existing curve, south of the creek crossing.

The public street connections included as part of the Luck Stone Quarry access are on sections of both state roads which do not have undesirable vertical, or horizontal

curvatures for all weather roads, with less than 40 MPH design speeds. The existing road widths are less than the VDOT desirable widths; However, Gant Lane south of the Luck Access road connection will not serve through traffic. No traffic hazards are observed.

VDOT Chapter 527 Requirements

As part of the requirements of VDOT's Chapter 527 regulations, a traffic impact analysis must be submitted with any rezoning or special exception action if the site trip generation is over a certain threshold. On behalf of the both applications, PHR+A documented previously that the volume thresholds did not require additional Chapter 527 review.

PHR+A

Trip Generation, Loudoun Water

For trip generation calculations for Parcel 15, the proposed uses were derived based on the number of employees and comparison to general employment uses in the Institute of Transportation Engineers (ITE) *Trip Generation (8th Edition)* Manual. Since this is a unique use, the ITE Manual does not have a direct public utilities use. However, in consultation with the applicant and the County, the application of a trip rate based on the maximum employee counts was used to determine possible trips. The application of ITE trip rates for general industrial and manufacturing uses were used consistent with VDOT guidelines, as shown in the June 2009 analysis. Note that the use is not anticipated to accommodate office uses, meeting areas or visitors associated with other public utility uses – such as the Loudoun Water headquarters in Ashburn – and truck deliveries and distribution are minimal, so the trips are expected to be significantly less than industrial facilities. Note that deliveries are for supplies and equipment only, as the transmission of services (water) is accommodated with the proposed pipeline from the Potomac River and the connections to existing and proposed water storage and distribution systems.

TABLE 1
 LOUDOUN WATER – TRIP GENERATION SUMMARY

| | AM Peak Period | | | PM Peak Period | | | Daily |
|------------------------------------|----------------|-----|-------|----------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | |
| Treatment Plant* (20 employees) | 8 | 2 | 10 | 2 | 6 | 8 | 43 |

Trip Generation, Luck Stone

For trip generation calculations for Luck Stone, the proposed uses will not generate additional trips, since the activities are proposed as an extension of the existing resource extraction, with traffic oriented to Route 659, to the east. The Trip generation on Route 659 is summarized in Table 2.

TABLE 2
 EXISTING LUCK STONE ROUTE 659 TRIP GENERATION

| Driveway Location | AM Peak Roadway | PM Peak Roadway | PM Peak Hour of Generator | Daily Trips (VPD) |
|--|-----------------|-----------------|---------------------------|-------------------|
| Quarry @ Builders Lane | 16 | 8 | N/A | |
| Quarry @ Jackpit Lane | 17 | 8 | N/A | |
| Quarry @ Luck Lane | 119 | 42 | 205 | 1,717 |
| Subtotal Luck Stone | 152 | 58 | 205 | 1,717 |
| Existing Trip Credit (for redevelopment sites) | -152 | -58 | -205 | -1,717 |
| Net New Trips | 0 | 0 | 0 | 0 |
| VDOT Threshold | NO< 250 | NO< 250 | NO< 250 | NO< 2,500 |

Source: Trips based on data collection May 13 and 14th, 2009. Daily trips derived assuming K factor of 0.12 for peak hour of the generator from Luck Stone previous PHR+A studies that assessed hourly shipments for the Leesburg Plant. PM generator at Midday.
 Previous Table 1, revised April 2010.

To account for potential reassignment of trips for employees and service vehicles, PHR+A accounted for possible trips as the new entrance. Based on the previous traffic estimates for the Luck Stone access further north of the subject zoning area, PHR+A assumed approximately 60 percent of the traffic volumes from the ZMAP 1990-003 access turning at the new entrance. The reduction in trips is envisioned since the employee counts are the same (10 employees) as derived in the 90's but the service activities are expected to be lower, since the proposed tunnel at Goose Creek will provide an improved maintenance route for the Luck Stone activities. The resultant trips in Table 3 still exceed typical employment uses trip rates or the peaks on a per employee basis for industrial and heavy industrial uses, to be conservative.

TABLE 3
 LUCK STONE - ROUTE 653 TRIP GENERATION SUMMARY

| | AM Peak Period | | | PM Peak Period | | | Daily |
|---------------------------|----------------|-----|-------|----------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | |
| Quarry* (10 employees) | 15 | 4 | 19 | 4 | 15 | 19 | 70 |

Source: PHR+A, factored from peak direction forecasts at 60 percent, Callow Associates, A Traffic Analysis of Luck Stone Quarry, April 1990, Figure 3.

Traffic Volumes

Existing Conditions

Traffic counts by PHR+A in May 2009 were used to establish existing traffic conditions. Data was collected on Tuesday, May 5, 2009 and Tuesday, May 12, 2009 during the roadway peak periods.

Growth Trends

The previous forecasts from Loudoun Water analysis were utilized with the following changes:

- Removed school bus traffic at Gant Lane (1 AM in and out), since the existing residence will not be occupied).
- Added through trips from on Route 653 from the Hybrid Energy activities, as approved. Access to the use is via Route 643 to the east, added 14 peak hour trips on Route 643.

Note that the Paint Ball activities on-site closed this Spring, reducing traffic volumes using Gant Lane.

Future Traffic with Loudoun Water

To assess the site impacts with the Loudoun Water application, the trip generation from Table 1 was assigned as turns at the proposed Luck Access, using the distributions from the June 2009 analysis. The trips, added to the through on Route 653, are summarized in Table 4. No Loudoun Water trips were assigned as turns at Gant Lane /Route 653 as revised.

TABLE 4: 2015 PEAK HOUR AND DAILY TRAFFIC VOLUMES (LOUDOUN WATER ONLY)

| Direction | Peak Hour Volume | | Daily Traffic Volume* |
|----------------------|------------------|-----|-----------------------|
| | AM | PM | |
| Route 653 Northbound | | | 1760 |
| NB Through | 14 | 62 | |
| NB Right | 4 | 1 | |
| Route 653 Southbound | | | 1760 |
| SB Through | 53 | 110 | |
| SB Left | 4 | 1 | |
| Luck Stone Entrance | | | 43 |
| NB Left | 1 | 3 | |
| NB Right | 1 | 3 | |

* Daily traffic volume (combined PM northbound and southbound)
 obtained using a 'k-factor' of 0.10.

Future Traffic with Luck Stone

To assess the traffic conditions with Luck Stone only, the trip generation from Table 3 was assigned as turns at the proposed Luck Access, using the distributions from the 1990 study, which oriented 75 percent of the trips to the north. The trips, added to the through on Route 653, are summarized in Table 5, without Loudoun Water activities. It

is anticipated that this scenario would not occur in the short-term, but is shown to define incremental Luck Stone trips on the new easement. Note these trips had previously been envisioned to be on Cochran Mill Road but turning at a Luck Stone entrance further north of the subject applications. No Luck Stone trips were assigned as turns at Gant Lane /Route 653 as revised.

TABLE 5: 2015 PEAK HOUR AND DAILY TRAFFIC VOLUMES (LUCK STONE ONLY)

| Direction | Peak Hour Volume | | Daily Traffic Volume* |
|----------------------|------------------|-----|-----------------------|
| | AM | PM | |
| Route 653 Northbound | | | 1850 |
| NB Through | 15 | 61 | |
| NB Right | 3 | 2 | |
| Route 653 Southbound | | | 1760 |
| SB Through | 52 | 110 | |
| SB Left | 12 | 2 | |
| Luck Stone Entrance | | | 70 |
| NB Left | 2 | 3 | |
| NB Right | 2 | 12 | |

* Daily traffic volume (combined PM northbound and southbound) obtained using a 'k-factor' of 0.10

Future Traffic with both SPEX

The traffic volumes from both pending applications are shown in Table 6.

TABLE 6: TOTAL 2015 PEAK HOUR AND DAILY TRAFFIC VOLUMES

| Direction | Peak Hour Volume | | Daily Traffic Volume* |
|----------------------|------------------|-----|-----------------------|
| | AM | PM | |
| Route 653 Northbound | | | 1850 |
| NB Through | 11 | 60 | |
| NB Right | 7 | 3 | |
| Route 653 Southbound | | | 1760 |
| SB Through | 51 | 107 | |
| SB Left | 16 | 3 | |
| Luck Stone Entrance | | | 110 |
| NB Left | 3 | 6 | |
| NB Right | 3 | 15 | |

* Daily traffic volume (combined PM northbound and southbound) obtained using a 'k-factor' of 0.10

Traffic Operations

The total build-out peak period traffic volumes at the Luck Access on Route 653 result in the operations as presented in Table 7, for each use and for the combined traffic conditions with both applications. The subject intersection was evaluated using the

Highway Capacity Software (HCS +) version 5.2. The unsignalized intersection operates at LOS "A" during the peaks with the subject site traffic. The HCS analysis outputs are included as Attachment B.

TABLE 7: LEVELS OF SERVICE SUMMARY – TRAFFIC CONDITIONS

| Intersection | | AM Peak Hour | | PM Peak Hour | |
|--|-----------|--------------|-------|--------------|-------|
| | | LOS | Delay | LOS | Delay |
| Route 653 @ Luck Access (with Loudoun Water only) | NB | | | | |
| | SB | A | 7.3 | A | 8.8 |
| | Westbound | A | 7.6 | A | 9.6 |
| | Overall | | | | |
| Route 653 @ Luck Access (with Luck Stone only) | NB | | | | |
| | SB | A | 7.3 | A | 8.8 |
| | Westbound | A | 7.6 | A | 9.3 |
| | Overall | | | | |
| Route 653 @ Luck Access Total 2015 Conditions | NB | | | | |
| | SB | A | 7.4 | A | 7.6 |
| | Westbound | A | 8.9 | A | 9.5 |
| | Overall | | | | |

LOS = Levels of Service; Delay = Delay in seconds. LOS not shown overall for unsignalized intersections or for approaches without left turns.

Turn Lane Warrants

Based on the proposed land uses, PHR+A verified the turn lane requirements at the proposed Luck Access, as summarized in the Attachment C. With the proposed volumes turns and throughs on Route 653, the commercial entrance does not warrant separate turn lanes. Based on the right turn volumes, a right turn deceleration or taper is not required. Since this is not a quarry entrance, separate turn lanes are not recommended for safety or capacity requirements.

Route 659 Supplemental Tables

As part of the OTS review comments from January 2010, the County requested clarification of some of the Route 659 traffic volumes and peak operations. The revised tables were included in the responses for the Luck Stone application, but are repeated below to clarify traffic conditions east of Goose Creek, which are not anticipated to change with the approvals of the subject applications.

The Table 1 in the 2009 TIA shows the trip generation for the PM peak for comparison to the VDOT 527 guidelines. The table is included in this statement as Table 2 to show the total AM and PM traffic volumes entering the Luck Stone sites west of Route 659 for existing conditions. As coordinated with OTS last October by PHR+A, the Table 3

turns were corrected to match the capacity analyses, and is shown below as Table 8. The Table 4 volumes were shown to determine heavy vehicle impacts at the primary intersection at Luck Lane, and are included below as Table 9.

REVISED TABLE 8: EXISTING 2009 PEAK HOUR AND DAILY TRAFFIC VOLUMES

| Direction | Daily Traffic Volume ^(1,2) | | |
|---|---------------------------------------|-----|----------------------|
| | AM | PM | |
| Route 659/Builders Lane/Belmont Station Drive | | | |
| Route 659 NB Left | 0 | 2 | 9,400 |
| NB Through | 410 | 820 | |
| NB Right | 13 | 19 | |
| Route 659 SB left | 5 | 17 | 9,450 |
| SB Through | 747 | 558 | |
| SB Right | 9 | 0 | |
| Builders Lane EB Left | 5 | 2 | 60 |
| EB Right | 2 | 4 | |
| Belmont Station Drive | | | 560 |
| WB Left | 19 | 13 | |
| WB Right | 12 | 7 | |
| Route 659/Jackpit Lane | | | |
| Route 659 NB Through | 390 | 839 | 9,450 |
| NB Left | 5 | 2 | |
| Route 659 SB Through | 763 | 575 | 9,500 |
| SB Right | 5 | 0 | |
| Jackpit Lane WB Left | 5 | 2 | 60 |
| WB Right | 2 | 4 | |
| Route 659/Luck Lane | | | |
| Route 659 Northbound | | | 9,550 |
| NB Through | 314 | 877 | |
| NB Left | 30 | 8 | |
| Route 65 Southbound | | | 9,450 |
| SB Through | 752 | 522 | |
| SB Right | 20 | 15 | |
| Luck Lane EB Left | 22 | 15 | 1,717 ⁽²⁾ |
| EB Right | 47 | 4 | |

(1) Daily traffic volume (combined northbound and southbound) obtained using a 'k-factor' of 0.15 as derived from previous study.

(2) Daily traffic volume (combined inbound/outbound trips) obtained using a K factor of 0.15 from previous counts at Luck Lane.

PHR+A

REVISED TABLE 9: EXISTING 2009 TRUCK PERCENTAGES

| Direction | Movement | AM Period | | | Midday Period (1) | | | PM Period | | |
|----------------------|----------|-----------|-------|---------|-------------------|-------|---------|-----------|-------|---------|
| | | trucks | total | truck % | trucks | total | truck % | trucks | total | truck % |
| Route 659 Northbound | Through | 3 | 314 | 1% | 12 | 297 | 4% | 4 | 877 | 0% |
| | Left | 25 | 30 | 83% | 48 | 50 | 96% | 6 | 8 | 75% |
| Route 659 Southbound | Through | 4 | 752 | 1% | 17 | 284 | 6% | 9 | 522 | 2% |
| | Right | 11 | 20 | 55% | 53 | 58 | 91% | 12 | 15 | 80% |
| Luck Lane Eastbound | Left | 19 | 22 | 86% | 37 | 42 | 88% | 9 | 15 | 60% |
| | Right | 44 | 47 | 94% | 48 | 55 | 87% | 0 | 4 | 0% |

(1) Midday peak is for the generator and not the roadway midday peak, which occurred between 12 and 1 PM.

Conclusions

Based on the trip generation and intersection analysis, PHR+A offers the following conclusions:

1. The existing and proposed access points on both Route 659 and Route 653 are adequate to handle the proposed traffic volumes --which are minimal-- generated by the Application.
2. The intersection of Route 653 and Luck Access operates with acceptable LOS as a two-way stop controlled intersection,
3. A VDOT 527 study is not required for the proposed uses.
4. The revised access to Route 653 northeast of Gant Lane will provide superior site ingress/egress.

We hope the above analysis will satisfy the OTS requirements in approving the special exception uses. Please contact our office at (703) 449-6700 if you have any further questions.

Sincerely,
PATTON HARRIS RUST & ASSOCIATES



Douglas R. Kennedy, P.E.
 Vice President

Director of Transportation Planning

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Enclosures:

Appendix A: Supplemental Statement confirmation
 Appendix B: HCS Outputs
 Appendix C: Turn Lane Warrants

cc: Karen Arnold Mark Peterson
 Bob Brown Bill Keefe

Douglas R. Kennedy PE

From: phillips, george [George.Phillips@loudoun.gov]
Sent: Tuesday, May 04, 2010 3:34 PM
To: Douglas R. Kennedy PE
Cc: Beacher, Andrew
Subject: RE: Gant Lane Alt access

Doug- 5/4/10

You do have the right E mail address for me.

This is O.K. with one addition. In addition to determining whether turn lanes are warranted, please also check for any safety related issues (sight distance, poor vertical and horizontal geometry etc.) at the proposed entrances on Route 653 (Cochran Mill Road) and Route 652 to which the proposed new bridge/road will connect. Also, you will want to specifically document/describe each aspect of the proposed trip generation for the Water Treatment Plant and Luck Stone trips so that all of the anticipated trips for these uses are included.

That's it. Thanks, George

From: Douglas R. Kennedy PE [mailto:Douglas.Kennedy@phra.com]
Sent: Tuesday, May 04, 2010 1:57 PM
To: phillips, george
Cc: karnold@loudounwater.org; Mark Peterson; Keefe, William J.; Laurie H. Butakis
Subject: Gant Lane Alt access

George:

As discussed, based on your meeting last week regarding the alternative access for the 2 pending applications, -- Loudoun Waster and Luck Stone --PHR+A will update the traffic statement from June 2009 for Route 653 to verify the turn lane requirements of the proposed private street connection to Cochran Mill Road (Route 653). Since the counts are from May 2009, we will use those volumes, previous growth assumed, and add the site trips associated with Loudoun Water sand the added site trips for Luck stone access. For that trip generation, the operation will not include using the entrance area a truck access for transporting gravel to the Luck Stone clients. That function is directed to the Route 659 entrance. Previous studies for the Luck Stone properties north of the subject site had estimated approximately 10 employees and service vehicles. The traffic analyses for the SPEX 1990-0019, by Callow Associates, Inc., had conservatively estimated approximately 25 AM and PM peak directional trips turning to the Luck Stone access on Route 653, to provide maintenance and employee access to the properties west of the Goose Creek. These volumes exceed the anticipated activities, since equipment maintenance access to the areas west of Goose Creek are anticipated to be handled with the creek connection. Therefore, POHR+A suggests that the Luck volumes be reduced by 40 % (rounding) and added to the Loudoun Water trips.

Note that the proposed trips on the new entrance will be tested for LOS and the VDOT turn lane requirements and submitted in one supplemental traffic statement for both applications. Since low volumes, we propose to check the operation as unsignalized HCS. The existing volumes on Gant Lane will remain, but note that the existing users (paint ball and the resident) from the 2009 counts are vacating the site, owned by Luck Stone.

Please advise if this approach is OK and we will update and submit through the County planners.

Thanks

Douglas R. Kennedy, P.E.

V.P., Director of Transportation Planning

Patton Harris Rust & Associates, Inc.

14532 Lee Road

Chantilly, Virginia 20151

P 703.449.6700

F 703.449.6714

www.phra.com

TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|----------------------|----------|------------------|---------------------|
| Analyst | LHB | Intersection | 653 / Luck Entrance |
| Agency/Co. | PHRA | Jurisdiction | Loudoun Co., VA |
| Date Performed | 5/6/2010 | Analysis Year | 2015 |
| Analysis Time Period | AM Peak | | |

Project Description 10348-2-0 Luck Entrance with Loudoun Water only AM

East/West Street: Luck Entrance

North/South Street: Cochran Mill Rd

Intersection Orientation: North-South

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

| Major Street | Northbound | | | Southbound | | |
|-------------------------------|------------|------|------|------------|------|------|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | 14 | 4 | 4 | 53 | |
| Peak-Hour Factor, PHF | 1.00 | 0.90 | 0.90 | 0.60 | 0.60 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0 | 15 | 4 | 6 | 88 | 0 |
| Percent Heavy Vehicles | 0 | — | — | 10 | — | — |
| Median Type | Undivided | | | | | |
| RT Channelized | | | 0 | | | 0 |
| Lanes | 0 | 1 | 0 | 0 | 1 | 0 |
| Configuration | | | TR | LT | | |
| Upstream Signal | | 0 | | | 0 | |
| Minor Street | Eastbound | | | Westbound | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | 1 | | 1 |
| Peak-Hour Factor, PHF | 1.00 | 1.00 | 1.00 | 0.60 | 1.00 | 0.60 |
| Hourly Flow Rate, HFR (veh/h) | 0 | 0 | 0 | 1 | 0 | 1 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 10 |
| Percent Grade (%) | 0 | | | 0 | | |
| Flared Approach | | N | | | N | |
| Storage | | 0 | | | 0 | |
| RT Channelized | | | 0 | | | 0 |
| Lanes | 0 | 0 | 0 | 0 | 0 | 0 |
| Configuration | | | | | LR | |

Delay, Queue Length, and Level of Service

| Approach | Northbound | Southbound | Westbound | | | Eastbound | | |
|------------------------|------------|------------|-----------|------|---|-----------|----|----|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | | LT | | LR | | | | |
| v (veh/h) | | 6 | | 2 | | | | |
| C (m) (veh/h) | | 1547 | | 953 | | | | |
| v/c | | 0.00 | | 0.00 | | | | |
| 95% queue length | | 0.01 | | 0.01 | | | | |
| Control Delay (s/veh) | | 7.3 | | 8.8 | | | | |
| LOS | | A | | A | | | | |
| Approach Delay (s/veh) | -- | -- | 8.8 | | | | | |
| Approach LOS | -- | -- | A | | | | | |

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | | |
|--|-------------------|-------------------|------------------|------------------|-------------------------------------|-------------------|-------------------|----|--|
| General Information | | | | | Site Information | | | | |
| Analyst | LHB | | | | Intersection | 653/Luck Entrance | | | |
| Agency/Co. | PHRA | | | | Jurisdiction | Loudoun Co., VA | | | |
| Date Performed | 5/6/2010 | | | | Analysis Year | 2015 | | | |
| Analysis Time Period | PM Peak | | | | | | | | |
| Project Description 10348-2-0 Luck Entrance with Loudoun Water only PM | | | | | | | | | |
| East/West Street: Luck Entrance | | | | | North/South Street: Cochran Mill Rd | | | | |
| Intersection Orientation: North-South | | | | | Study Period (hrs): 0.25 | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | | |
| Major Street | Northbound | | | | | | Southbound | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| | L | T | R | L | T | R | | | |
| Volume (veh/h) | | 62 | 1 | 1 | 110 | | | | |
| Peak-Hour Factor, PHF | 1.00 | 0.50 | 0.50 | 0.70 | 0.70 | 1.00 | | | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 124 | 2 | 1 | 157 | 0 | | | |
| Percent Heavy Vehicles | 0 | - | - | 10 | - | - | | | |
| Median Type | Undivided | | | | | | | | |
| RT Channelized | | | 0 | | | 0 | | | |
| Lanes | 0 | 1 | 0 | 0 | 1 | 0 | | | |
| Configuration | | | TR | LT | | | | | |
| Upstream Signal | | 0 | | | 0 | | | | |
| Minor Street | Eastbound | | | Westbound | | | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | | |
| | L | T | R | L | T | R | | | |
| Volume (veh/h) | | | | 3 | | 3 | | | |
| Peak-Hour Factor, PHF | 1.00 | 1.00 | 1.00 | 0.75 | 1.00 | 0.75 | | | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 0 | 0 | 4 | 0 | 4 | | | |
| Percent Heavy Vehicles | 0 | 0 | 0 | 10 | 0 | 10 | | | |
| Percent Grade (%) | 0 | | | 0 | | | | | |
| Flared Approach | | N | | | N | | | | |
| Storage | | 0 | | | 0 | | | | |
| RT Channelized | | | 0 | | | 0 | | | |
| Lanes | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Configuration | | | | | LR | | | | |
| Delay, Queue Length, and Level of Service | | | | | | | | | |
| Approach | Northbound | Southbound | Westbound | | | Eastbound | | | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 | |
| Lane Configuration | | LT | | LR | | | | | |
| v (veh/h) | | 1 | | 8 | | | | | |
| C (m) (veh/h) | | 1412 | | 783 | | | | | |
| v/c | | 0.00 | | 0.01 | | | | | |
| 95% queue length | | 0.00 | | 0.03 | | | | | |
| Control Delay (s/veh) | | 7.6 | | 9.6 | | | | | |
| LOS | | A | | A | | | | | |
| Approach Delay (s/veh) | -- | -- | 9.6 | | | | | | |
| Approach LOS | -- | -- | A | | | | | | |

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | |
|---|-------------------|-------------------|------------------|-------------------------------------|---------------------|------------------|----|
| General Information | | | | Site Information | | | |
| Analyst | LHB | | | Intersection | 653 / Luck Entrance | | |
| Agency/Co. | PHRA | | | Jurisdiction | Loudoun Co., VA | | |
| Date Performed | 5/6/2010 | | | Analysis Year | 2015 | | |
| Analysis Time Period | AM Peak | | | | | | |
| Project Description 10348-2-0 Luck Entrance with Luck Stone only AM | | | | | | | |
| East/West Street: Luck Entrance | | | | North/South Street: Cochran Mill Rd | | | |
| Intersection Orientation: North-South | | | | Study Period (hrs): 0.25 | | | |
| Vehicle Volumes and Adjustments | | | | | | | |
| Major Street | Northbound | | | Southbound | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | |
| | L | T | R | L | T | R | |
| Volume (veh/h) | | 15 | 3 | 0 | 52 | | |
| Peak-Hour Factor, PHF | 1.00 | 0.90 | 0.90 | 0.60 | 0.60 | 1.00 | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 16 | 3 | 0 | 86 | 0 | |
| Percent Heavy Vehicles | 0 | — | — | 10 | — | — | |
| Median Type | Undivided | | | | | | |
| RT Channelized | | | 0 | | | 0 | |
| Lanes | 0 | 1 | 0 | 0 | 1 | 0 | |
| Configuration | | | TR | LT | | | |
| Upstream Signal | | 0 | | | 0 | | |
| Minor Street | Eastbound | | | Westbound | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | |
| | L | T | R | L | T | R | |
| Volume (veh/h) | | | | 2 | | 2 | |
| Peak-Hour Factor, PHF | 1.00 | 1.00 | 1.00 | 0.60 | 1.00 | 0.60 | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 0 | 0 | 3 | 0 | 3 | |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 10 | |
| Percent Grade (%) | 0 | | | 0 | | | |
| Flared Approach | | N | | | N | | |
| Storage | | 0 | | | 0 | | |
| RT Channelized | | | 0 | | | 0 | |
| Lanes | 0 | 0 | 0 | 0 | 0 | 0 | |
| Configuration | | | | | LR | | |
| Delay, Queue Length, and Level of Service | | | | | | | |
| Approach | Northbound | Southbound | Westbound | | | Eastbound | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 |
| Lane Configuration | | LT | | LR | | | |
| v (veh/h) | | 0 | | 6 | | | |
| C (m) (veh/h) | | 1547 | | 964 | | | |
| v/c | | 0.00 | | 0.01 | | | |
| 95% queue length | | 0.00 | | 0.02 | | | |
| Control Delay (s/veh) | | 7.3 | | 8.8 | | | |
| LOS | | A | | A | | | |
| Approach Delay (s/veh) | -- | -- | 8.8 | | | | |
| Approach LOS | -- | -- | A | | | | |

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | | |
|---|-------------------|-------------------|------------------|------|-------------------------------------|-------------------|-------------------|----|--|
| General Information | | | | | Site Information | | | | |
| Analyst | LHB | | | | Intersection | 653/Luck Entrance | | | |
| Agency/Co. | PHRA | | | | Jurisdiction | Loudoun Co., VA | | | |
| Date Performed | 5/6/2010 | | | | Analysis Year | 2015 | | | |
| Analysis Time Period | PM Peak | | | | | | | | |
| Project Description 10348-2-0 Luck Entrance with Luck Stone only PM | | | | | | | | | |
| East/West Street: Luck Entrance | | | | | North/South Street: Cochran Mill Rd | | | | |
| Intersection Orientation: North-South | | | | | Study Period (hrs): 0.25 | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | | |
| Major Street | Northbound | | | | | | Southbound | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| | L | T | R | L | T | R | | | |
| Volume (veh/h) | | 61 | 2 | 2 | 110 | | | | |
| Peak-Hour Factor, PHF | 1.00 | 0.50 | 0.50 | 0.70 | 0.70 | 1.00 | | | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 122 | 4 | 2 | 157 | 0 | | | |
| Percent Heavy Vehicles | 0 | — | — | 10 | — | — | | | |
| Median Type | Undivided | | | | | | | | |
| RT Channelized | | | 0 | | | 0 | | | |
| Lanes | 0 | 1 | 0 | 0 | 1 | 0 | | | |
| Configuration | | | TR | LT | | | | | |
| Upstream Signal | | 0 | | | 0 | | | | |
| Minor Street | Eastbound | | | | | | Westbound | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | | |
| | L | T | R | L | T | R | | | |
| Volume (veh/h) | | | | 3 | | 12 | | | |
| Peak-Hour Factor, PHF | 1.00 | 1.00 | 1.00 | 0.75 | 1.00 | 0.75 | | | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 0 | 0 | 4 | 0 | 16 | | | |
| Percent Heavy Vehicles | 0 | 0 | 0 | 10 | 0 | 10 | | | |
| Percent Grade (%) | 0 | | | 0 | | | | | |
| Flared Approach | | N | | | N | | | | |
| Storage | | 0 | | | 0 | | | | |
| RT Channelized | | | 0 | | | 0 | | | |
| Lanes | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Configuration | | | | | LR | | | | |
| Delay, Queue Length, and Level of Service | | | | | | | | | |
| Approach | Northbound | Southbound | Westbound | | | Eastbound | | | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 | |
| Lane Configuration | | LT | | LR | | | | | |
| v (veh/h) | | 2 | | 20 | | | | | |
| C (m) (veh/h) | | 1412 | | 852 | | | | | |
| v/c | | 0.00 | | 0.02 | | | | | |
| 95% queue length | | 0.00 | | 0.07 | | | | | |
| Control Delay (s/veh) | | 7.6 | | 9.3 | | | | | |
| LOS | | A | | A | | | | | |
| Approach Delay (s/veh) | -- | -- | 9.3 | | | | | | |
| Approach LOS | -- | -- | A | | | | | | |

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst LHB
 Agency/Co. PHRA
 Date Performed 5/6/2010
 Analysis Time Period AM Peak

Site Information

Intersection 653 / Luck Entrance
 Jurisdiction Loudoun Co., VA
 Analysis Year 2015

Project Description 10348-2-0 Total Luck Entrance AM

East/West Street: Luck Entrance

North/South Street: Cochran Mill Rd

Intersection Orientation: North-South

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

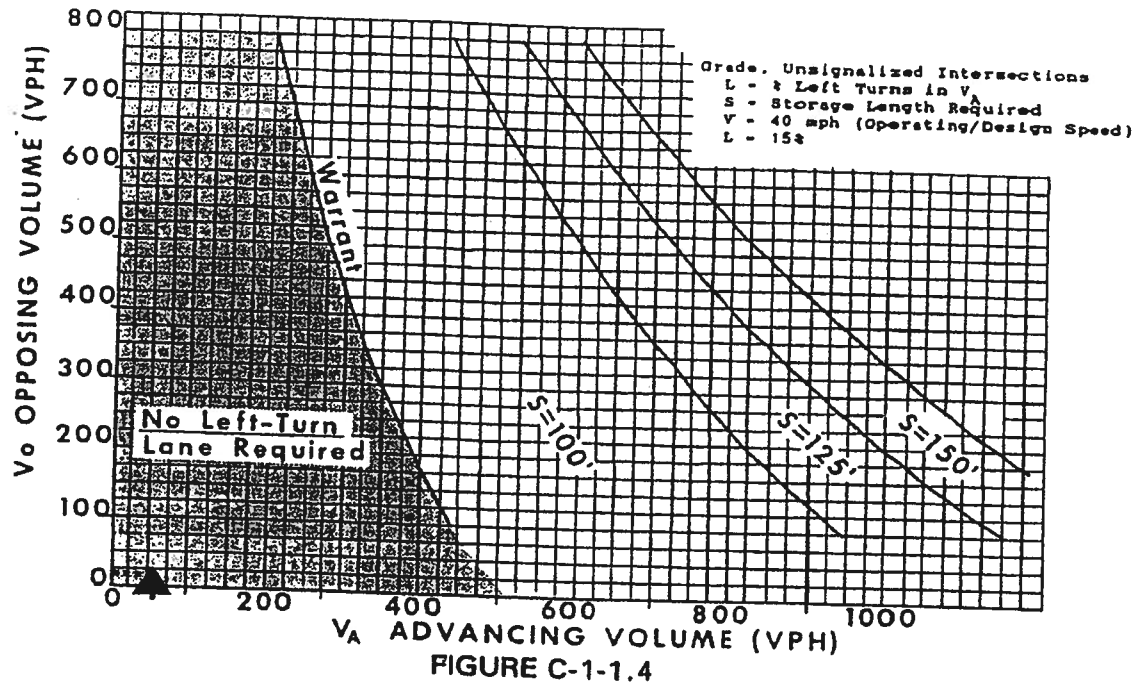
| Major Street | Northbound | | | Southbound | | |
|-------------------------------|------------|------|------|------------|------|------|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | 11 | 7 | 16 | 51 | |
| Peak-Hour Factor, PHF | 1.00 | 0.90 | 0.90 | 0.60 | 0.60 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0 | 12 | 7 | 26 | 84 | 0 |
| Percent Heavy Vehicles | 0 | - | - | 10 | - | - |
| Median Type | Undivided | | | | | |
| RT Channelized | | | 0 | | | 0 |
| Lanes | 0 | 1 | 0 | 0 | 1 | 0 |
| Configuration | | | TR | LT | | |
| Upstream Signal | | 0 | | | 0 | |
| Minor Street | Eastbound | | | Westbound | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | 3 | | 3 |
| Peak-Hour Factor, PHF | 1.00 | 1.00 | 1.00 | 0.60 | 1.00 | 0.60 |
| Hourly Flow Rate, HFR (veh/h) | 0 | 0 | 0 | 4 | 0 | 4 |
| Percent Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 10 |
| Percent Grade (%) | 0 | | | 0 | | |
| Flared Approach | | N | | | N | |
| Storage | | 0 | | | 0 | |
| RT Channelized | | | 0 | | | 0 |
| Lanes | 0 | 0 | 0 | 0 | 0 | 0 |
| Configuration | | | | | LR | |

Delay, Queue Length, and Level of Service

| Approach | Northbound | Southbound | Westbound | | | Eastbound | | |
|------------------------|------------|------------|-----------|------|---|-----------|----|----|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | | LT | | LR | | | | |
| v (veh/h) | | 26 | | 8 | | | | |
| C (m) (veh/h) | | 1547 | | 923 | | | | |
| v/c | | 0.02 | | 0.01 | | | | |
| 95% queue length | | 0.05 | | 0.03 | | | | |
| Control Delay (s/veh) | | 7.4 | | 8.9 | | | | |
| LOS | | A | | A | | | | |
| Approach Delay (s/veh) | - | - | 8.9 | | | | | |
| Approach LOS | - | - | A | | | | | |

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | |
|--|-------------------|-------------------|------------------|-------------------------------------|-------------------|------------------|----|
| General Information | | | | Site Information | | | |
| Analyst | LHB | | | Intersection | 653/Luck Entrance | | |
| Agency/Co. | PHRA | | | Jurisdiction | Loudoun Co., VA | | |
| Date Performed | 5/6/2010 | | | Analysis Year | 2015 | | |
| Analysis Time Period | PM Peak | | | | | | |
| Project Description 10348-2-0 Total Luck Entrance PM | | | | | | | |
| East/West Street: Luck Entrance | | | | North/South Street: Cochran Mill Rd | | | |
| Intersection Orientation: North-South | | | | Study Period (hrs): 0.25 | | | |
| Vehicle Volumes and Adjustments | | | | | | | |
| Major Street | Northbound | | | Southbound | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | |
| | L | T | R | L | T | R | |
| Volume (veh/h) | | 60 | 3 | 3 | 107 | | |
| Peak-Hour Factor, PHF | 1.00 | 0.50 | 0.50 | 0.70 | 0.70 | 1.00 | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 120 | 6 | 4 | 152 | 0 | |
| Percent Heavy Vehicles | 0 | — | — | 10 | — | — | |
| Median Type | Undivided | | | | | | |
| RT Channelized | | | 0 | | | 0 | |
| Lanes | 0 | 1 | 0 | 0 | 1 | 0 | |
| Configuration | | | TR | LT | | | |
| Upstream Signal | | 0 | | | 0 | | |
| Minor Street | Eastbound | | | Westbound | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | |
| | L | T | R | L | T | R | |
| Volume (veh/h) | | | | 6 | | 15 | |
| Peak-Hour Factor, PHF | 1.00 | 1.00 | 1.00 | 0.75 | 1.00 | 0.75 | |
| Hourly Flow Rate, HFR (veh/h) | 0 | 0 | 0 | 8 | 0 | 20 | |
| Percent Heavy Vehicles | 0 | 0 | 0 | 10 | 0 | 10 | |
| Percent Grade (%) | 0 | | | 0 | | | |
| Flared Approach | | N | | | N | | |
| Storage | | 0 | | | 0 | | |
| RT Channelized | | | 0 | | | 0 | |
| Lanes | 0 | 0 | 0 | 0 | 0 | 0 | |
| Configuration | | | | | LR | | |
| Delay, Queue Length, and Level of Service | | | | | | | |
| Approach | Northbound | Southbound | Westbound | | | Eastbound | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 |
| Lane Configuration | | LT | | LR | | | |
| v (veh/h) | | 4 | | 28 | | | |
| C (m) (veh/h) | | 1412 | | 831 | | | |
| v/c | | 0.00 | | 0.03 | | | |
| 95% queue length | | 0.01 | | 0.10 | | | |
| Control Delay (s/veh) | | 7.6 | | 9.5 | | | |
| LOS | | A | | A | | | |
| Approach Delay (s/veh) | — | — | 9.5 | | | | |
| Approach LOS | — | — | A | | | | |

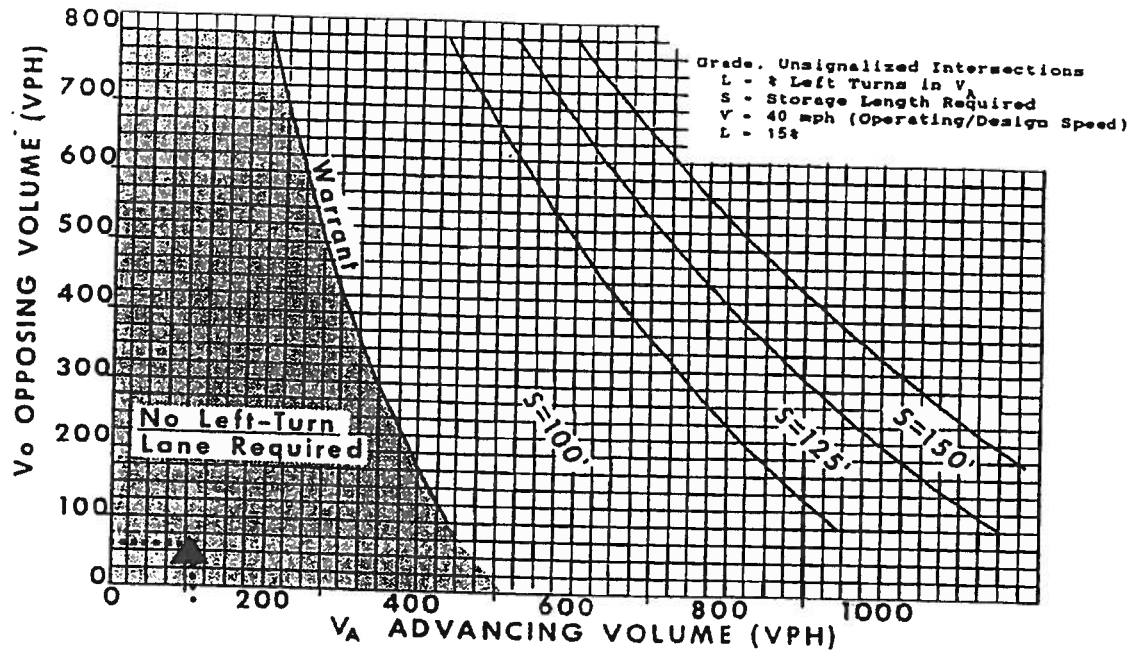
WARRANT FOR LEFT-TURN STORAGE LANES ON TWO-LANE HIGHWAYS



| | | |
|------------------------------------|----------------|-------------------|
| Southbound Route 653: | 067 VPH | |
| Left turns: | 16 VPH | |
| % Left Turns | 23.88% | Peak Hour: |
| Northbound Opposing Volume: | 18 VPH | AM |

Left Turn Storage Lane Warrant - NOT Satisfied

WARRANT FOR LEFT-TURN STORAGE LANES ON TWO-LANE HIGHWAYS

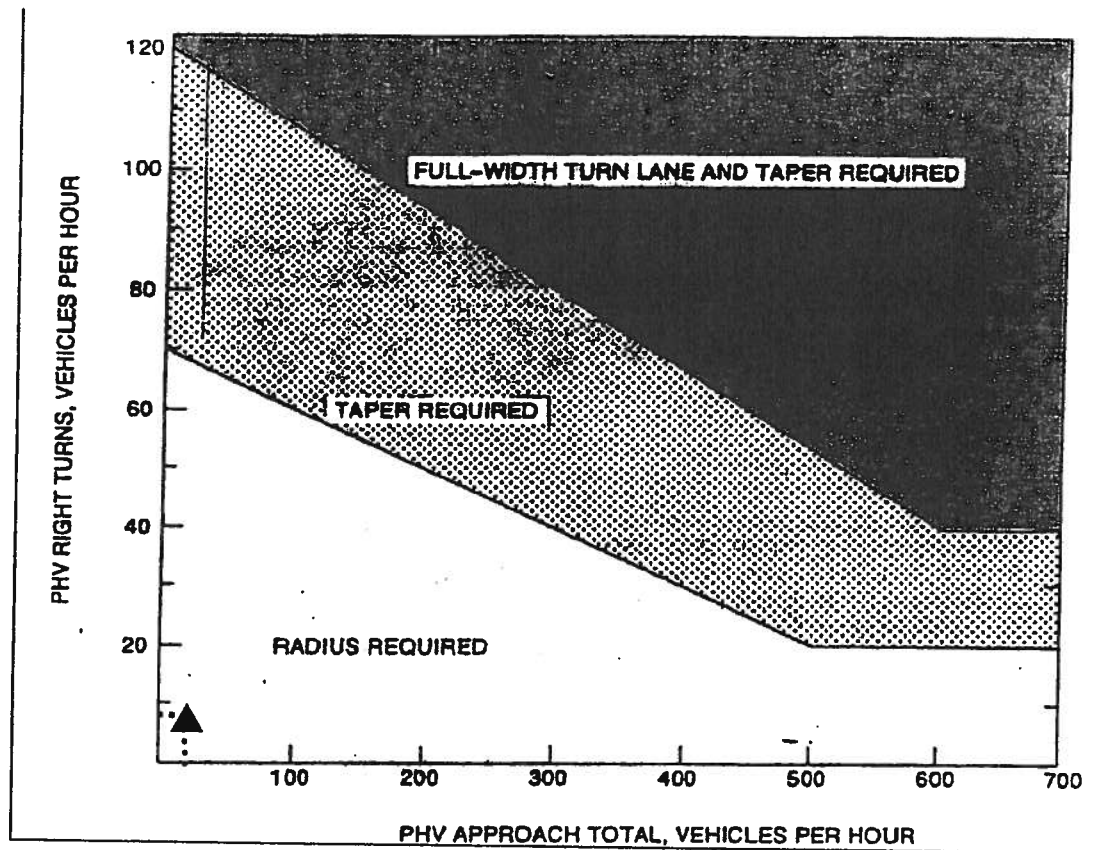


| | | |
|------------------------------------|----------------|-------------------|
| Southbound Route 653: | 110 VPH | |
| Left turns: | 3 VPH | |
| % Left Turns | 2.73% | Peak Hour: |
| Northbound Opposing Volume: | 63 VPH | PM |

Left Turn Storage Lane Warrant - NOT Satisfied

**Total 2015 AM
Right Turn Warrant**

May 2010



Northbound Approach: 018 VPH

Right turns: 7 VPH

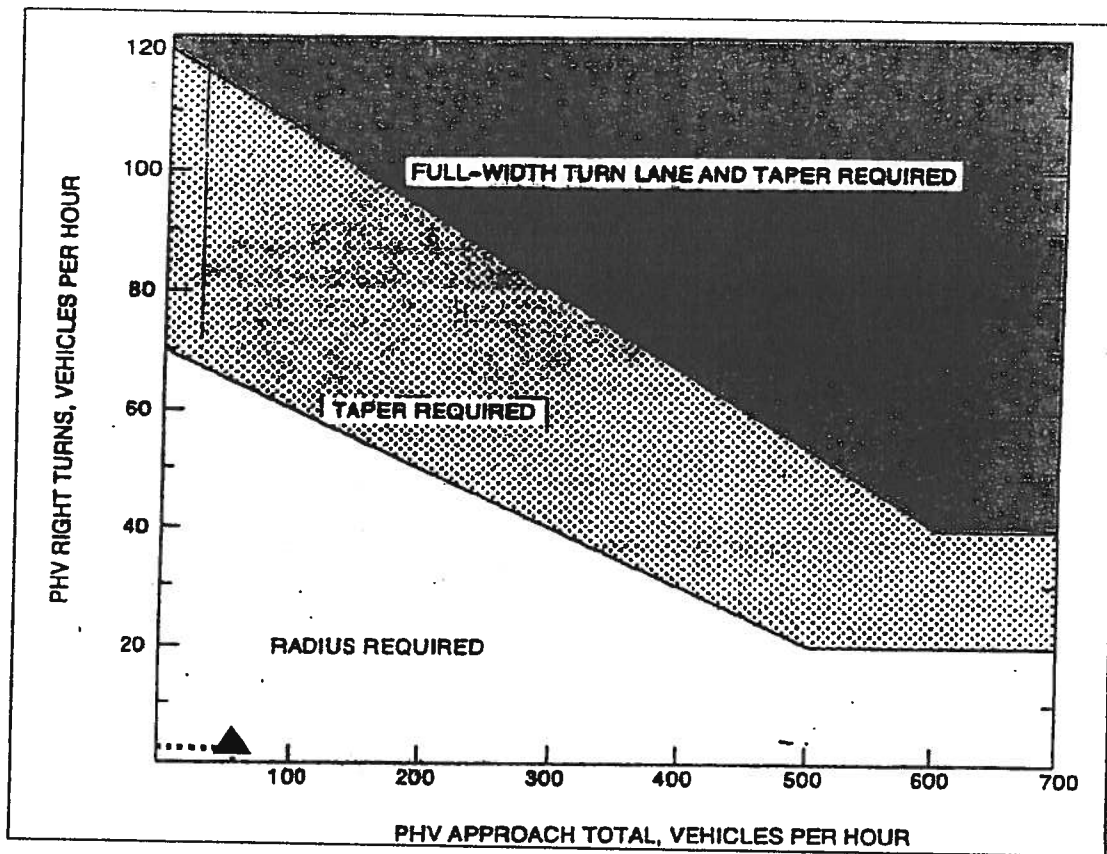
% Right Turns 38.89%

**Peak Hour:
AM**

Right Turn Lane Warrant - NOT Satisfied

Total 2015 PM Right Turn Warrant

May 2010



Northbound Approach: 063 VPH

Right turns: 3 VPH

% Right Turns 4.76%

Peak Hour:
PM

Right Turn Lane Warrant - NOT Satisfied

RECEIVED

MAY 07 2010

PHR+A, Supplemental Materials to the June 1, 2009, Luck Stone Quarry Expansion; Traffic Statement for Parcels 9, 10, 15

LOUDOUN COUNTY
DEPARTMENT OF PLANNING

Revised April 2010

**REVISED TABLE 1
EXISTING SITE TRIP GENERATION**

| Driveway Location | AM Peak Roadway | PM Peak Roadway | PM Peak Hour of Generator | Daily Trips (VPD) |
|--|-----------------|-----------------|---------------------------|-------------------|
| Quarry @ Builders Lane | 16 | 8 | N/A | |
| Quarry @ Jackpit Lane | 17 | 8 | N/A | |
| Quarry @ Luck Lane | 119 | 42 | 205 | 1,717 |
| Subtotal Luck Stone | 152 | 58 | 205 | 1,717 |
| Existing Trip Credit (for redevelopment sites) | -152 | -58 | -205 | -1,717 |
| Net New Trips | 0 | 0 | 0 | 0 |
| VDOT Threshold | NO< 250 | NO< 250 | NO< 250 | NO< 2,500 |

Source: Trips based on data collection May 13 and 14th, 2009. Daily trips derived assuming K factor of 0.12 for peak hour of the generator from Luck Stone previous PHR+A studies that assessed hourly shipments for the Leesburg Plant. PM generator at Midday.

REVISED TABLE 3: EXISTING 2009 PEAK HOUR AND DAILY TRAFFIC VOLUMES

| Direction | Daily Traffic Volume ^(1,2) | | |
|---|---------------------------------------|-----|-------|
| | AM | PM | |
| Route 659/Builders Lane/Belmont Station Drive | | | |
| Route 659 Northbound | | | 9,400 |
| NB Left | 0 | 2 | |
| NB Through | 410 | 820 | |
| NB Right | 13 | 19 | |
| Route 659 Northbound | | | 9,450 |
| SB Left | 5 | 17 | |
| SB Through | 747 | 558 | |
| SB Right | 9 | 0 | |
| Builders Lane | | | 60 |
| EB Left | 5 | 2 | |
| EB Right | 2 | 4 | |
| Belmont Station Drive | | | 560 |
| WB Left | 19 | 13 | |
| WB Right | 12 | 7 | |
| Route 659/Jackpit Lane | | | |
| Route 659 Northbound | | | 9,450 |
| NB Through | 390 | 839 | |

| | | | |
|----------------------|-----|-----|----------------------|
| NB Left | 5 | 2 | |
| Route 659 Southbound | | | |
| SB Through | 763 | 575 | 9,500 |
| SB Right | 5 | 0 | |
| Jackpit Lane | | | |
| WB Left | 5 | 2 | 60 |
| WB Right | 2 | 4 | |
| Route 659/Luck Lane | | | |
| Route 659 Northbound | | | |
| NB Through | 314 | 877 | 9,550 |
| NB Left | 30 | 8 | |
| Route 65 Southbound | | | |
| SB Through | 752 | 522 | 9,450 |
| SB Right | 20 | 15 | |
| Luck Lane | | | |
| EB Left | 22 | 15 | 1,717 ⁽²⁾ |
| EB Right | 47 | 4 | |

(1) Daily traffic volume (combined northbound and southbound) obtained using a 'k-factor' of 0.15 as derived from previous study.

(2) Daily traffic volume (combined inbound/outbound trips) obtained using a K factor of 0.15 from previous counts at Luck Lane.

TABLE 4: EXISTING 2009 TRUCK PERCENTAGES

| Direction | Movement | AM Period | | | Midday Period (1) | | | PM Period | | |
|----------------------|----------|-----------|-------|---------|-------------------|-------|---------|-----------|-------|---------|
| | | trucks | total | truck % | trucks | total | truck % | trucks | total | truck % |
| Route 659 Northbound | Through | 3 | 314 | 1% | 12 | 297 | 4% | 4 | 877 | 0% |
| | Left | 25 | 30 | 83% | 48 | 50 | 96% | 6 | 8 | 75% |
| Route 659 Southbound | Through | 4 | 752 | 1% | 17 | 284 | 6% | 9 | 522 | 2% |
| | Right | 11 | 20 | 55% | 53 | 58 | 91% | 12 | 15 | 80% |
| Luck Lane Eastbound | Left | 19 | 22 | 86% | 37 | 42 | 88% | 9 | 15 | 60% |
| | Right | 44 | 47 | 94% | 48 | 55 | 87% | 0 | 4 | 0% |

(1) Midday peak is for the generator and not the roadway midday peak, which occurred between 12 and 1 PM.

TABLE 7
Existing 2009 Signal Warrants

April 2010

| 13 HOUR WEEKDAY SIGNAL WARRANT ANALYSIS WITH EXISTING VOLUMES | | | | | | | | | | | | | | |
|---|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| DATE: Existing 1:5-N/E-W/S | | | | | | | | | | | | | | |
| INTERSECTION: Bainmont Ridge Road/Luck Lane | | | | | | | | | | | | | | |
| APPROACH LINK VOLUMES | | | | | | | | | | | | | | |
| Hourly Volumes By Approach | | | | | | | | | | | | | | |
| Time Period | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB |
| Approach | North | South | East | West | North | South | East | West | North | South | East | West | North | South |
| 6:00-7:00 AM | 708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00-8:00 AM | 713 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00-9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00-10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00-11:00 AM | 323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00-12:00 PM | 342 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00-1:00 PM | 350 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00-2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00-3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00-4:00 PM | 477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00-5:00 PM | 537 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00-6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00-7:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 13 Hour Volume Warrants | | | | | | | | | | | | | | |
|-------------------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| Time Period | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB |
| Approach | North | South | East | West | North | South | East | West | North | South | East | West | North | South |
| 6:00-7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00-8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00-9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00-10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00-11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00-12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00-1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00-2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00-3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00-4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00-5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00-6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00-7:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Only 7 Hours of Data Available | | | | | | | | | | | | | | |
|--------------------------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| Time Period | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB |
| Approach | North | South | East | West | North | South | East | West | North | South | East | West | North | South |
| 6:00-7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00-8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00-9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00-10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00-11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00-12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00-1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00-2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00-3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00-4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00-5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00-6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00-7:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WARRANTS BASED ON: | | | | | | | | | | | | | | |
|--------------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| NUMBER OF LANES | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB |
| Approach | North | South | East | West | North | South | East | West | North | South | East | West | North | South |
| North Approach | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| South Approach | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| East Approach | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| West Approach | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |

| 13 Hour Volume Warrants | | | | | | | | | | | | | | |
|-------------------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| Time Period | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB |
| Approach | North | South | East | West | North | South | East | West | North | South | East | West | North | South |
| 6:00-7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00-8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00-9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00-10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00-11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00-12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00-1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00-2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00-3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00-4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00-5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00-6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00-7:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WARRANTS BASED ON: | | | | | | | | | | | | | | |
|--------------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| NUMBER OF LANES | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB | WB | EB | SB | NB |
| Approach | North | South | East | West | North | South | East | West | North | South | East | West | North | South |
| North Approach | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| South Approach | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| East Approach | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| West Approach | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |

PHR+A

10348-1-1

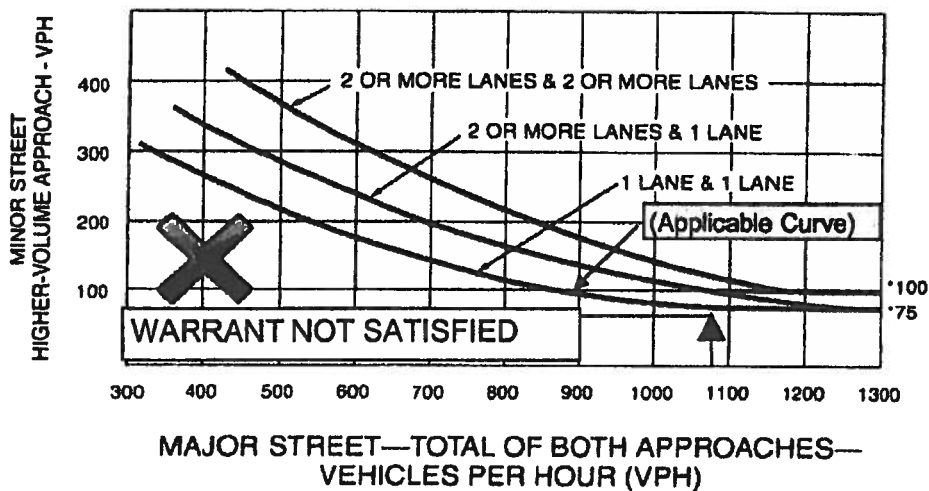
Warrant_LuckLane_050_2009_2010_MV2.xls

Table 8A:
Peak Hour - Warrant #3

April 2010

Belmont Ridge Road & Luck Lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane

2009
Traffic Situation

Major Street
Total of Both Approaches: 1,075 VPH

Minor Street
Higher Volume Approach: 062 VPH

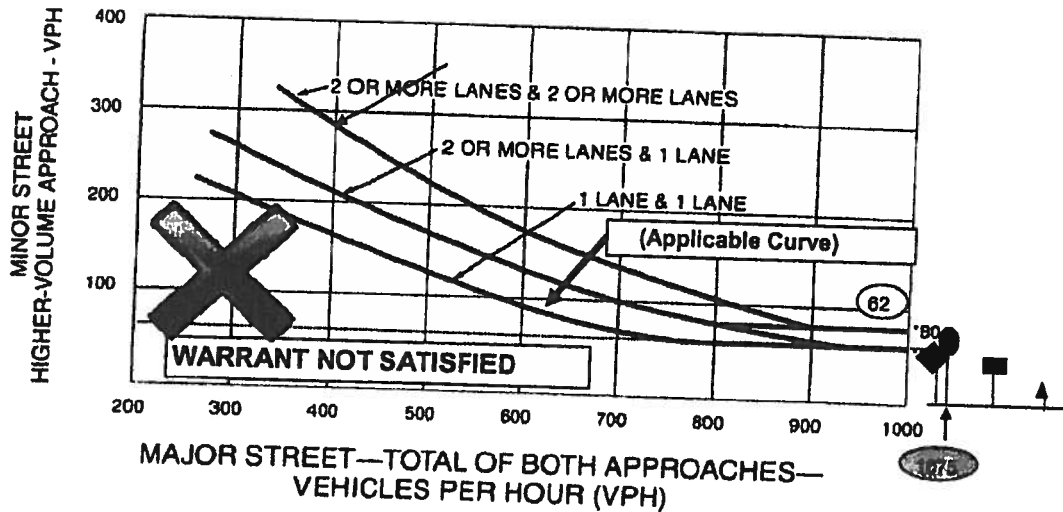
Peak Hour:
8:00 - 9:00 AM

Table 8B:
Four Hour Warrant #2
2009 Signal Warrant

April 2010

Belmont Ridge Road & Luck Lane

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Major Street
Total of Both Approaches: 1,075 VPH

Minor Street
Higher Volume Approach: 062 VPH

Peak Hour(s):
8:00 -9:00 AM

Source: MUTCD Signal Warrants - Warrant 3 - Figure 4C-2

Analysis: PHR+A

| Plotted Points | | | |
|----------------|----------------|---|---|
| # | Time Period | Major Street Total of Both Approaches (VPH) | Minor Street Higher Volume Approach (VPH) |
| 1 | 7:00 - 8:00 AM | 1,072 | 60 |
| 2 | 8:00 - 9:00 AM | 1,075 | 62 |
| 3 | 4:00 - 5:00 PM | 1,215 | 45 |
| 4 | 5:00 - 6:00 PM | 1,422 | 19 |

COUNTY OF LOUDOUN
PIN: 191-16-9866
Use: GOVT PROPERTY
Ex. Zone: JLMA20

LUCK STONE CORP
PIN: 151-16-0598
Use: SINGLE FAM
Ex. Zone: MRHI / PD

3 COCHRAN MILL RD

0 PRESCRIPTIVE
EASEMENT

COUNTY OF LOUDOUN
PIN: 191-16-9866
Use: GOVT PROPERTY
Ex. Zone: JLMA20

Limits of SPEX

Approximate
50' Private Access
Easement

SCENIC CREEK
VALLEY BUFFER

50' RSCOD
BUFFER

APPROX LIMITS
MAJOR FLOODPLAIN

JOHN A. ANDREWS
PIN: 193-39-3665
Use: VACANT
Ex. Zone: JLMA20 / TR10

CONC.
BRIDGE
CMP

CMP

UPL

50' RSCOD
BUFFER

SCENIC CREEK
VALLEY BUFFER

PVC

JOHN A. ANDREWS
PIN: 193-39-3665
Use: VACANT
Ex. Zone: TR10

PEM

290

Rt 652 G/
30' PRF

25' ROW
Dedication

100'
YL

SITE 44LD1:

GRAVE DRIVE



COMMONWEALTH of VIRGINIA
DEPARTMENT OF TRANSPORTATION

GREGORY A. WHIRLEY
ACTING COMMISSIONER

14685 Avion Parkway
Chantilly, VA 20151
(703) 383-VDOT (8368)



June 14, 2010

Ms. Jane McCarter
County of Loudoun
Department of Planning
1 Harrison Street, S.E.
P.O. Box 7000
Leesburg, Virginia 20177-7000

Re: Luck Stone
(2nd Submission)
Loudoun County Application Numbers ZMAP 2009-0003, SPEX 2009-0027 and SPEX
2010-0013 (First Submission of Tunnel)

Dear Ms. McCarter:

We have reviewed the above noted application as requested in your May 11, 2010 transmittal. It should be noted that VDOT Route 659 Improvement Project # 0659-053-262, PE 102, RW202, RW204, C502, C504 has no funding for either right of way acquisition or construction and, therefore, currently has no time horizon. We offer the following comments:

1. Right and of way and easements should be dedicated, at no cost, consistent with VDOT's Route 659 Belmont Ridge Road Improvement project # 0659-053-262, PE 102, RW202, RW204, C502, C504.
2. The applicant should construct frontage improvements consistent with VDOT's Route 659 Belmont Ridge Road Improvement project # 0659-053-262., PE 102, RW202, RW204, C502, C504 or we recommend the County pursue a monetary contribution from this applicant to be applied towards with VDOT's Route 659 Belmont Ridge Road Improvement project # 0659-053-262., PE 102, RW202, RW204, C502, C504 – in particular, a monetary amount equivalent to the cost of frontage improvements consistent with the cited VDOT project.
3. Provide standard right and left turn lanes at the site entrance to Route 659, Belmont Ridge Road.

4. If a traffic signal is warranted at site entrance to Route 659 then it should be designed and installed by this applicant when warrants are met as determined by VDOT. Include this verbiage in the proffers.
5. Additionally, related to the Luck Lane site entrance to Route 659: A field review revealed intersection sight distance and/or stopping sight distance to be questionable. Upgrading of this site entrance to meet current VDOT standards should be incorporated into these improvements in order to bring the entrance into compliance to provide a safe entrance.
6. Dedicate right of way a minimum of 25' from centerline along Gant Lane, Route 653 frontage.
7. In reference to Cochran Mill Road, Route 652 and in accordance with the Loudoun *Countywide Transportation Plan (CTP)*:
 1. Dedicate one-half of the ultimate 70' right of way or 35' from centerline along site frontage
 2. Construct one-half of the ultimate U4 (4-lane undivided) roadway along site frontage
 3. Entrance to Cochran Mill Road, Route 652 will require a VDOT Entrance Permit which will include but is not limited to verification of adequate sight distance, specification of an appropriate entrance type, adequately addressing drainage issues, etc.
8. Condition # 5 of SPEX 1990-0019 referencing the requisite right of way dedication of 60' from centerline along Belmont Ridge Road, Route 659 should be made now, if it has not already been dedicated. Please provide status of this right of way dedication.
9. Please provide this office with a copy of the revised proffers/special exception approval conditions for review.

If you have any questions, please call me at (703) 383-2061.

Sincerely,



John Bassett, P.E.
Transportation Engineer

cc: Imad Salous, P. E.
Khalid Ghandi, P. E.
James C. Zeller, P. E.



LOUDOUN COUNTY, VIRGINIA
Department of Fire, Rescue and Emergency Management

803 Sycolin Road, Suite 104 Leesburg, VA 20175
Phone 703-777-0333 Fax 703-771-5359



Memorandum

To: Nicole Steele, Project Manager
From: Maria Figueroa Taylor, Fire-Rescue Planner
Date: November 2, 2009
Subject: Luck Stone Quarry ZMAP 2009-0003
Loudoun Water and Luck Stone Quarry ZMAP 2009-0004

Thank you for the opportunity to review the above captioned applications.

The Fire-Rescue GIS and Mapping coordinator offered the following information regarding estimated response times:

| PIN | Project name | Leesburg VF-RC Travel Time |
|-------------|-------------------------------|--|
| 153-35-5865 | Luck Stone & Loudoun Water | 6 min, 55 sec (fire, station 20) 8 minutes (rescue, station 13) |

Travel times are determined using ESRI GIS network analyst along the county's street centerline with distance and speed limit being the criteria. Travel time is reported in minutes and seconds. For the approximate response time two minutes is added for turnout time.

| Project name | Leesburg VF-RC Response Times |
|-------------------------------|---|
| Luck Stone & Loudoun Water | 8 min, 55 sec (fire, station 20) 10 minutes (rescue, station 13) |

The Fire and Rescue Staff is not opposed the rezoning applications. However, the Applicant must demonstrate adequate access and circulation of emergency vehicles throughout the site at the time more specific plans are available.

If you have any questions or need additional information, please contact me at 703-777-0333.

c: Project file

Teamwork * Integrity * Professionalism * Service

September 24, 2009

MEMORANDUM TO: Nicole Steele
Department of Planning MSC #62

FROM: Jeff Widmeyer REHS , MSC #68
Sr. Env. Health Specialist
Division Of Environmental Health

SUBJECT: ZMAP 2009-0003 & 2009-0004 & SPEX 2009-0027 Luckstone
Quarry & Loudoun Water, PIN#s 1531355865, 152361675,
152255356 & 151377403

The above referenced project meets the requirements of Section 1245.10 of the LSDO for:

| | Yes | No | N/A |
|------------------------------|-----|-----|--------------|
| a. Proposed Drainfield Sites | ___ | ___ | <u> X </u> |
| b. Proposed Wells | ___ | ___ | <u> X </u> |

The locations on the plats, submitted by Urban, Ltd., dated **6/01/2009 & Dewberry & Davis, LLC 6/01/2009 7/31/2009**, are correct as shown:

| | | | |
|----------------------------------|-----|-----|--------------|
| a. Wells (existing and proposed) | ___ | ___ | <u> X </u> |
| b. Drainfield Sites | ___ | ___ | <u> X </u> |

Health Department staff recommends: Approval X Denial _____
Approval with conditions _____

Items that are incorrect/deficient are listed on the attached page.

Attachments Yes _____ No X _____

If further information or clarification on the above project is required, please contact Jeff Widmeyer at 777-0642.

JPW/JEL/jpw

BLAD 2009-0047; LCPS
September 14, 2009, Page 2

ATTACHMENT

- 1.) It appears in our records there is an existing hand dug well that is not shown on the plat and has never been properly abandoned. Note 13 indicates the well drilled in 2000 shall remain, but the proximity to the storm water pond as indicated on the plat dictates that well should be properly abandoned. Any the existing septic tank or tanks (not shown) must be must be properly abandoned prior to approval. (LSDO 1245.10 and FSM Chapter 8.)



**COUNTY OF LOUDOUN
PARKS, RECREATION AND COMMUNITY SERVICES
REFERRAL MEMORANDUM**

To: Jane McCarter, Project Manager, Planning Department **(MSC #62)**
From:  Brian G. Fuller, Park Planner, Facilities Planning and Development
(MSC #78)
Through:  Mark A. Novak, Chief Park Planner, Facilities Planning and Development
CC: Diane Ryburn, Director
Steve Torpy, Assistant Director
Su Webb, Chairman, PROS Board, Catoclin District
Robert C. Wright, PROS Board, Open Space Member
James E. O'Connor, PROS Board, Open Space Member

Date: July 15, 2010



Subject: **Luck Stone Quarry Expansion (2nd Submission)**
ZMAP 2009-0003, SPEX 2009-0027 and SPEX 2010-0013

Election District: Catoclin **Sub Planning Area:** Lower Sycolin

MCPI #: 152-36-1675, 152-25-5356, 153-35-5865, and 151-37-7403

BACKGROUND and ANALYSIS:

The Properties are located on the west bank of the Goose Creek, east of Route 653 (Cochran Mill Road), and south of the Washington & Old Dominion (W&OD) Trail in the Catoclin District. The Application consists of approximately 353.23 acres within four Properties the Transition Policy Area, and they are currently zoned JLMA-20, TR-10 and MR-HI. The Properties are owned by the Luck Stone Corporation and Loudoun Water for use as current and future quarries in the Leesburg Plant mining operation, an existing diabase rock quarry, and for water impoundment and a water treatment plant.

Luck Stone Corporation has recently partnered with Loudoun Water to complete future expansion plans for public water in central Loudoun County. Luck Stone recently purchased these parcels of land west of Goose Creek, south of their previously-approved (SPEX 1990-0019, ZMAP 1999-0004, and SPEX 1999-0006) proposed expansion "Quarry D" to create a larger, contiguous quarry. In addition, Luck Stone is proposing to remove the southern buffer on Quarry D to allow the expansion, and to revise Conditions 15 through 19 under SPEX 1990-0019. This is being requested to permit a tunnel instead of a conveyor/bridge to serve the planned expansion on the west side of Goose Creek to the processing plant on the east side, which has direct access to Route 659 (Belmont Ridge Road.) Once the mining has been completed, it is anticipated that the quarry areas will be used for water impoundment/lake purposes.

POLICY:

The site is governed under the land use policies in the Revised General Plan. The subject properties are located within the Lower Sycolin Subarea of the Transition Policy Area. The Planned Land Use Map adopted with the Revised General Plan designates that the site is planned for Transitional Residential uses.

Under the Revised General Plan, quarries are considered Heavy Industrial uses. Furthermore, under the Green Infrastructure policies, *"The County will facilitate the long-range planning of quarry sites, including setting aside sufficient land for extraction and creating an environment that will be attractive for future uses once the quarrying use is no longer viable."*

COMMENTS:

With respect to Parks, Recreation and Community Services (PRCS) we offer the following comments and recommendations:

1. PRCS is developing a system of interconnected linear parks along the County's Stream Valley Corridors. This is consistent with the Greenways and Trail Policies of the Revised General Plan, Policy 1 (p. 5-39): *"Greenways include areas along rivers and streams that are often ideal for trails"*. Policy 4 (p. 5-40): *"The County will seek through purchase, proffer, density transfer, donation or open-space easement, the preservation of greenways and the development of trails"*. Parks, Recreation and Community Services Policies, Policy 3 (p. 3-15): *"The County encourages the contiguous development of regional linear parks, trail, and natural open space corridors to provide pedestrian links and preserve environmental and aesthetic resources."* In previous verbal discussions, Luck Stone Corporation has been willing to provide trail connections along Goose Creek, and Staff hopes this proposal will not reverse Luck Stone's willingness to provide the trail section.

As a Condition of Approval, PRCS requests that the Applicant consider dedicating the proposed area for the "300-foot Permanent Conservation Easement" to the County for the purposes of a linear park along Goose Creek. This project property is vital for extending a trail along Goose Creek to connect with established portions of the Potomac Heritage National Scenic Trail and its trailhead at Keep Loudoun Beautiful Park downstream.

Should the Applicant not be willing to dedicate the property, PRCS requests a condition that the Applicant construct a 4-foot wide natural trail within a 30-foot wide public access easement along Goose Creek within the 300-foot buffer, to be field located by PRCS Staff. This would be consistent with previously-

approved applications along Goose Creek, such as Play to Win Sports (SPEX 2007-0056).

Applicant Response: *The applicants commit to the Plan recommended 300-foot no-build buffer area along the Application Property's frontage with Goose Creek.*

Issue Status: **Unresolved.** Staff requests that I.C more closely match Proffer I.2 as proposed with ZMAP 2009-0004, and to include the trail to be located on existing Parcels 153-35-5965, 152-16-8431, 152-26-8334, 152-27-4798, and 152-36-1675.

While Staff appreciates the Applicant's commitment to "a future trail within the buffer parallel to Goose Creek" within Proffer I.2, Staff requests that the additional following language be added to the proffer: *"The future trail will be dedicated within a public access easement at the request of the County to serve as a connection to the Potomac Heritage National Scenic Trail. The ultimate location of the trail centerline will be field located by Department of Parks, Recreation and Community Services Staff."*

As previously stated by Staff, this trail will be a vital connection to the Potomac Heritage National Scenic Trail, as well as to a future trail section to be provided south (upstream) by Loudoun Water along their proposed water treatment plant.

2. Staff requests the opportunity to explore potential recreational opportunities, within and around the quarry site with the Applicant, before and after quarry construction, such as non-motorized boating, fishing, hiking, and picnicking.

Applicant Response: *Luck Stone is amenable to exploring potential recreational opportunities within and around the quarry site and appreciates staff's understanding that quarry safety during the construction and pendency of the proposed quarrying operation. Luck Stone understands Staff's desire to preserve the planned Quarry D for a future recreational amenity; this desire is consistent with the purpose of the MR-HI zoning district, which envisions the proposed quarry use as a "long term, but interim district," and recognizes that the proposed quarry can be converted "... to other compatible and beneficial uses consistent with the Comprehensive Plan." To the end, Luck Stone envisions that the quarry use will ultimately provide a public amenity once quarrying operations have ceased. However, given the extended timeframe for exhaustion of the planned quarry (perhaps as long as 100 years from the beginning of extraction), Luck Stone cannot commit to the creation of a public recreational amenity at this time, nor can it commit as to what recreational opportunities would be appropriate following the end of extraction activities.*

Luck Stone is regulated by the Virginia Department of Mines, Minerals, and Energy ("DMME") under Chapter 16, Title 45.1, Articles 1-4 of the Code of Virginia (1950), as amended, and we have included a revised reclamation plan that meets DMME requirements. The (DMME) will require Luck Stone to follow reclamation standards as a precondition to the release of the quarry permit when mining operations have ceased, and these standards include provision for revegetation in areas that are capable of being regarded and resoiled. Revegetation will therefore be accomplished prior to implementation of the proposed water storage use.

Issue Status: Unresolved. Loudoun County **Revised General Plan Mineral Resource Extraction Policy 9** (p.5-26) states that, ***"An application to permit the development of new quarries or the expansion of existing quarries will include a concept plan for the use of the site after extraction is complete."***

PRCS understands that there is an unforeseeable end to the timeline for extraction opportunities within the proposed quarry expansion, but requests that the Applicant provide additional information behind what DMME requires for site stabilization and restoration. Furthermore, Staff supposed the proposal for the quarry to be used by Loudoun Water for future water storage, and pre-treated water storage is a very compatible use for many passive recreational opportunities, such as fishing, non-motorized boating, and diving.

3. Staff notes that the Applicant's Reclamation Plan states that it is difficult to commit to a specific viable end-use for the subject properties after quarry operations, but notes the opportunity for a potential recreation lake or public water reservoir. PRCS requests that should Loudoun Water not need the Quarry D expansion area for water impoundment, the Applicant commit to a Condition of Approval for the creation of a public recreational amenity in coordination with the Department of Parks, Recreation, and Community Services.

Applicant Response: *As stated above, the Applicant appreciates staff's desire to preserve the planned Quarry D for a future recreational amenity and envisions that it will ultimately provide a public amenity once quarrying operations have ceased. Luck Stone is regulated by the Virginia Department of Mines, Minerals, and Energy ("DMME") under Chapter 16, Title 45.1, Articles 1-4 of the Code of Virginia (1950), as amended, and we have included a revised reclamation plan that meets DMME requirements. However, given the extended timeframe for exhaustion of the planned quarry (perhaps as long as 100 years from the beginning of extraction) as well as the introduction of new technologies and applications for quarry reuse in the coming decades, the Applicant cannot commit to the creation of a public recreational amenity at this time as the ultimate end-use of the quarry pit has not been determined.*

Issue Status: Unresolved. Loudoun County Revised General Plan Mineral Resource Extraction Policy 9 (p.5-26) states that, *"An application to permit the development of new quarries or the expansion of existing quarries will include a concept plan for the use of the site after extraction is complete."*

PRCS understands that there is an unforeseeable end to the timeline for extraction opportunities within the proposed quarry expansion, but requests that the Applicant provide additional information behind what DMME requires for site stabilization and restoration. Furthermore, Staff supposed the proposal for the quarry to be used by Loudoun Water for future water storage, and pre-treated water storage is a very compatible use for many passive recreational opportunities, such as fishing, non-motorized boating, and diving.

NEW COMMENTS (July 15, 2010):

4. Staff notes that in our April 28, 2010 meeting with the Applicant, that there may be an opportunity to dedicate open space to the County for recreational uses in the western portion of the application area, within Parcels 152-36-1675 and 151-16-0598. Staff notes that this area is located adjacent to Philip A. Bolen Memorial Park, and along Sycolin Creek, which has been identified by Staff as a potential passive stream valley trail corridor connection between Bolen Park and Goose Creek.

Staff requests more information about the Applicant's planned uses for the proposed open space area between Sycolin Creek and Cochran Mill Road, and recommends that the Applicant consider dedicating this area to the County for additional passive and active recreational opportunities.

CONCLUSION:

Staff has identified the above, outstanding issues that require additional information to complete the review of this application.

If you have any questions or concerns regarding these comments, please do not hesitate to contact me personally via phone at 571-258-3251, or via e-mail at brian.fuller@loudoun.gov. You may also contact Mark Novak via phone at 703-737-8992, or via e-mail at mark.novak@loudoun.gov. I look forward to attending any meetings or work sessions to offer PRCS support, or to be notified of any further information regarding this project.

County of Loudoun
Department of Planning
MEMORANDUM

DATE: October 27, 2009

TO: Nicole Steele, Project Manager, Land Use Review

FROM: Heidi Siebentritt, Historic Preservation Planner,
Community Information and Outreach

**SUBJECT: ZMAP 2009-0003 Luck Stone Quarry & ZMAP 2009-0004
Loudoun Water and Luck Stone Quarry**

Background

The subject application represents a joint proposal from Luck Stone Quarry and Loudoun Water to rezone approximately 353 acres of land (subject property) from (Transitional Residential – 10 (TR-10) and Joint Land Management Area – 20 (JLMA--20) to the (Mineral Resource Heavy Industry (MR-HI) and Planned Development – General Industry (PD-GI) zoning districts. Approval of the rezoning application would allow Luck Stone to request approval of a Special Exception (SPEX) for the expansion of quarry operations south of the current quarry use area (permitted Quarry D) to encompass approximately 183 acres of land owned by Luck Stone Quarry and an approximately 118 acre portion of the 168.37 acre property currently owned by Loudoun Water. The SPEX application is being concurrently reviewed by staff under SPEX 2009-0027, Luck Stone Quarry Expansion.

Plan Compliance

The subject property is governed by the policies of the Revised General Plan and the Heritage Preservation Plan. The Revised General Plan states the County will require an archeological and historic resources survey as part of all development applications and include a plan for recordation and preservation of any identified resources, along with measures for mitigation and adaptive reuse (Revised General Plan, Chapter 5, Historic and Archaeological Resources Policy 11).

The Heritage Preservation Plan specifically states that the County's primary objective is the protection and conservation of significant archaeological resources identified during the land development process (Heritage Preservation Plan, Chapter 2, Archaeological Resource Policy 9).

Analysis

Staff has reviewed the Phase 1 Archaeological Survey Report prepared by Thunderbird Archeology dated October, 2005. The 2005 survey and resulting report relate to the former 652 acre "Ridgewater Park" application (ZMAP 2005-0028) which was denied by the Board of Supervisors in 2007. The current application includes approximately 353 acres of the 652-acre area represented in the initial Phase 1 report. The 2005 report has been distilled into two newly submitted reports: *Phase 1 Archeological Survey of the 183 Acre Luck Stone Properties* and *Phase 1 Archeological Survey of the circa 170 Acre Loudoun Water Parcel 15 Property*. These two reports provide the information from the 2005 report and are specific to the current ZMAP project area.

Archaeological sites 44LD1321, 44LD1322 and 44LD1323 and 44LD1324 were identified as part of the archaeological survey of the subject property currently owned by Loudoun Water. Sites 44LD1325 and 44LD1327 (inclusive of architectural resource 053-5277), were identified within the project area currently owned by Luck Stone. Sites 44LD1321-1323 and 44LD1325 have been interpreted as transient camps dating from an unknown prehistoric period. Due to the lack of diagnostic artifacts and the low number of total artifacts recovered from these sites, they are not considered to be eligible for listing in the National Register of Historic Places and no further investigation of these sites is warranted.

Site 44LD1327 is a historic period site represented in part by a mid 19th century dwelling (053-5277). The site area has been disturbed to such a degree that the consultant has deemed the archaeological site not eligible for listing in the National Register. The related historic dwelling has also been altered substantially. Therefore the consultant had deemed the house not eligible for the National Register. A smokehouse and detached kitchen were also identified near the dwelling, but these structures are not contemporary with the historic house. As the house has been the subject of a reconnaissance – level architectural survey meeting Virginia Department of Historic Resources' standards, no further work is warranted for this resource.

Site 44LD1324

Site 44LD1324 is located within the 118 acre portion of the Loudoun Water property that is part of the current SPEX area. Site 44LD1324 is potentially eligible for listing in the National Register. The site has been interpreted as the remains of a late 19th century tenant farm, although the artifacts recovered from the site suggest that a dwelling may have been present on the site by the mid 19th century. The site contains several architectural features including an in-tact stone foundation, stone piers and a stone hearth. The consultant has recommended further investigation of Site 44LD1324 to confirm National Register eligibility if development of the property will impact the Site.

The applicant's Statement of Justification (SOJ) notes that the proposed uses will not significantly have impact on historic or archaeological resources (SOJ, page 17). However, the submitted plans show Site 44LD1324 is located partially outside of the 300' "no build buffer" as shown on sheet 2 of 10 in the submitted materials. As stated previously, staff is concurrently reviewing SPEX 2009-0027 for the expansion of the quarry use. The plans submitted with the SPEX application show Site 44LD1324 partially within the proposed "water storage area," and partially within the area of the SPEX labeled "ultimate use to be determined." Therefore, staff has concerns that Site 44LD1324 may be impacted if the subject application and corresponding SPEX application are approved.

Further, if the uses proposed under SPEX 2009-0027 (Luck Stone Quarry Expansion) and SPEX 2009-0021, et al. (Loudoun Water – Water Treatment Plant) are approved in the future, underground piping for the transport of raw water from the Potomac River to the Loudoun Water property (SPEX 2009-0021, et al.) will be necessary. Staff notes that the ultimate alignment for this utility may impact significant cultural resources, though specific impacts may not be known until the alignment is reviewed by the County at Site Plan submission.

Recommendations

As stated previously, the Heritage Preservation Plan specifically states that the County's primary objective is the protection and conservation of significant archaeological resources identified during the development process (Heritage Preservation Plan, Chapter 2, *Archaeological Resource Policy 9*). To meet this objective, staff recommends the applicant commit to the following:

1. Conduct of a Phase 2 archaeological evaluation of Site 44LD1324 to determine National Register eligibility. The Phase 2 evaluation will also serve to accurately define the size and boundaries of the Site. If the Site is determined to be ineligible for the National Register, no further investigation of the Site or protection of the Site is required;
2. Avoidance and conservation in place of Site 44LD1324 if the Site is deemed eligible for the National Register;
3. If conservation is warranted per the outcome of the Phase 2 archaeological evaluation, specific language in the deed, property plat and on the record plat identifying the area to be preserved will be included to conserve Site 44LD1324 in perpetuity. Further, during any land disturbing activities, permanent or semi-permanent (dismountable metal) fencing will be erected around the perimeter of the Site, using the Site boundaries delineated and mapped during the Phase 2 evaluation, and a minimum 25 foot buffer will be applied along those same boundaries, to ensure that the Site is not inadvertently impacted; and
4. The ultimate proposed alignment of the raw water main that will be constructed upon approval of SPEX 2009-0021, SPMI 2009-0006 and CMPT 2009-0007, Loudoun Water – Water Treatment Plant, will be

reviewed by the County Archaeologist, or other appropriate staff at Site Plan submission to assess impacts to significant cultural resources. If construction of the water main will impact such sites, prior to approval of the Site Plan, the applicant will commit to mitigation of impacts to these sites, which may also require more intensive archaeological or architectural investigation. County review and the determination of mitigation requirements will be done in coordination with the Virginia Department of Historic Resources if the construction of the water main requires Federal review under Section 106 of the National Historic Preservation Act.

Staff notes that the commitments approved as part of this subject application be referenced as part of any action to approve SPEX 2009-0027, SPEX 2009-0021 and SPMI 2009-0006.

Coordination with VDHR

Staff notes that if this project requires federal permits or will use federal funds, the development proposal will be reviewed by the Virginia Department of Historic Resources (VDHR) per Section 106 of the National Historic Preservation Act of 1966 (as amended). Impacts to resources listed in, or eligible for, the National Register of Historic Places may require mitigation per VDHR. It is important to note that VDHR will make the ultimate determination regarding National Register eligibility for all affected resources. Therefore, no action should be taken to impact or mitigate impacts to any cultural resource on the property until VDHR is consulted.

Staff recommends that the applicant consult with VDHR as early as possible to ensure that any impact mitigation proffered to the County as part of an approval of this application is consistent with VDHR's requirements under Section 106.

cc: Michael "Miguel" Salinas, AICP, Program Manager, Community Information & Outreach
Julie Pastor, AICP, Director, Department of Planning

The Goose Creek Scenic River Advisory Committee

751 Miller Drive, Suite C-2 • Leesburg, VA 20175

571-233-1703 • GooseCreekRiver@yahoo.com



May 14, 2010

Ms. Jane M. McCarter, Project Planner
Loudoun County Dept. of Planning
1 Harrison Street, S.E., Third Floor
Leesburg VA 20177

RECEIVED

MAY 17 2010

LOUDOUN COUNTY
DEPARTMENT OF PLANNING

Re: ZMAP 2009 0003; SPEX 2009-0027; Separated Special Exception Request for
Inter-Quarry Tunnel; Luck Stone Corporation

and ZMAP-2009-0004, Loudoun Water and Luck Stone

Dear Ms. McCarter:

The Goose Creek Scenic River Advisory Committee appreciates the opportunity to comment further on the above projects.

After consulting with the project representative, we have reviewed the above applications and have no significant changes in our previous comments.

We are aware of the land swap between the two companies and find that it will further enhance the protection of the 300' no build-scenic buffer along Goose Creek. Further, the building of the tunnel will negate the need for the previously-approved bridge over the Creek.

Thank you for the opportunity to comment on the projects and we would appreciate being informed of any further developments concerning this application.

Sincerely,

Helen E. Casey
Goose Creek Scenic River Advisory Committee

Chairman
Mark Peterson

Vice Chairman
John Isom

Committee
Helen E. Casey
Phil Daley
Kurt Erickson
Lynn Gibson

Steven Combs-Lafleur
Benjamin C. Lawrence
Joan G. Rokus



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Division of Natural Heritage
217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951

June 9, 2010

Jane McCarter
County of Loudoun
P.O. Box 7000
Leesburg, VA 20177

Re: ZMAP 2009-0003; SPEX 2009-0027 : SPEX 2010-0013 -Tunnel and Second Submission of Quarry

Dear Ms. McCarter:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

DCR reiterates its October 2009 comments. "According to the information currently in our files, natural heritage resources have not been documented at this location. However, several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia, may occur at this location if suitable habitat is present. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).

In Northern Virginia, diabase supports occurrences of several global and state rare plant species: Earleaf foxglove (*Agalinis auriculata*, G3/S1/NL/NL), Blue-hearts (*Buchnera americana*, G5/S1S2/NL/NL), Purple milkweed (*Asclepias purpurascens*, G5/S2/NL/NL), Downy phlox (*Phlox pilosa*, G5T5/S2/NL/NL), Stiff goldenrod (*Oligoneuron rigidum* var. *rigidum*, G5T5/S2/NL/NL), and Marsh hedgenettle (*Stachys pilosa* var. *arenicola*, G5T4/S1/NL/NL). Our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for the resource in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at chris.ludwig@dcr.virginia.gov or 804-371-6206 to discuss arrangements for field work."

DCR supports at least a 300 foot no build zone for the protection of the significant Basic Oak Hickory community documented along Goose Creek as noted on page 4 of the Second Submission: Loudoun Water/Luck Stone ZMAP 2009-0004.

Since it has been determined that this project or activity may impact Ginseng, a state-protected plant, VDACS will respond directly to ensure compliance with Virginia's Endangered Plant and Insect Species Act. Further correspondence regarding the potential impacts of this project or activity on state-listed plant and insect species should be directed to VDACS.

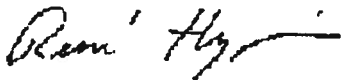
Our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity. Please note Goose Creek has been designated as a scenic river in the state of Virginia. Due to this designation, DCR recommends you contact Lynn Crump of the DCR-Division of Planning and Recreation at 804-786-5054 or Lynn.Crump@dcr.virginia.gov.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Shirl Dressler at (804) 367-6913.

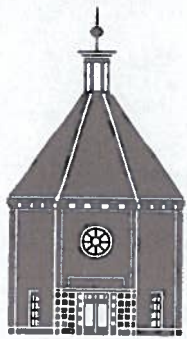
Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,

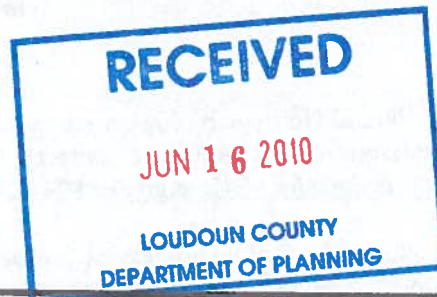


S. Rene' Hypes
Project Review Coordinator

Cc: Keith Tignor, VDACS
Lynn Crump, DCR-DPRR



The Town of
**Leesburg,
Virginia**



JOHN WELLS
Town Manager

25 West Market Street ■ P.O. Box 88 ■ 20178 ■ 703-771-2700 ■ Fax: 703-771-2727 ■ www.leesburgva.gov

June 10, 2010

Ms. Jane McCarter, Project Manager
Loudoun County Department of Planning
1 Harrison Street, SE
P.O. Box 7000
Leesburg, VA 20177

Re: **ZMAP 2009-0004, Luckstone Quarry**

Dear Ms. McCarter:

Thank you for the opportunity to comment on the above mentioned application being processed by Loudoun County. Town staff has reviewed the application and offers the following comments:

1. A small portion (approximately 80 acres) of the site located north and west of Sycolin Creek is within the UGA/JMLA. Through proffer commitments, the applicant has designated this portion of the site for open space on the concept development plan via the following note: "ZMAP area northwest of Sycolin Creek to be used for open space purposes until a ZCPA is approved. Refer to ZMAP 2009-0003 proffers." The Town requests clarification on whether such a ZCPA has already been submitted or when one is expected.
2. The Town Plan shows the approximately 80 acres within the UGA/JMLA as planned for "Light Industrial" although no specific description of this parcel is given in the Town Plan's Southeast Sector Land Use Policies. The Town believes the proposed open space is a temporary "holding" classification considering the note on the Concept Development Plan indicating a future ZCPA. Leesburg does not consider the open space use as incompatible with the Town Plan's light industrial designation.
3. Luckstone proposes a tunnel under Goose Creek for quarry trucks and equipment to use the existing quarry access on Belmont Ridge Road. There will be no quarry traffic on Cochran Mill Road or other roads near the Town. The Town requests the applicant make a commitment that all quarry traffic will access through the Luckstone Quarry site on Belmont Ridge Road.
4. The Countywide Transportation Plan shows Cochran Mill as a future 4-lane undivided minor collector with a total right-of-way width of 70 feet. The Town Plan supports this designation although the terminology is slightly different (the Town Plan refers to the

road designation as a "through collector"). The Town recommends that the applicant dedicate or reserve the ultimate right-of-way width.

5. The Town Plan shows a planned multi-use path near Sycolin Creek east of Cochran Mill Road on land within the UGA/JMLA. The Town recommends that the applicant dedicate the appropriate right-of-way for this feature.
6. Because the UGA/JMLA area portion of this site is designated as open space in the rezoning, there will be no sewer or water connections at this time. The comprehensive plans for both Leesburg and Loudoun County have jointly designated this area for service by Town of Leesburg Utilities. In the future, if and when other uses are proposed for this site, the Town will provide utility services.

Thank you for the opportunity to provide input on this project. Should you require further information, do not hesitate to contact me or Irish Grandfield of my staff at 703.771.2766.

Sincerely,



John Wells
Town Manager

Cc: Mayor and Town Council
Leesburg Planning Commission
Jeanette Irby, Town Attorney
Susan Berry Hill, Director of Planning and Zoning
David Fuller, Comprehensive Planner
Irish Grandfield, Senior Environmental Planner
Jeanette Irby, Town Attorney

November 2, 2009

Ms. Nicole Steele
Department of Planning
1 Harrison Street, S.E.
P. O. Box 7000
Leesburg, Virginia 20177-7000

Re: Luck Stone Quarry Expansion; SPEX-2009-0027

Dear Ms. Steele:

Loudoun Water has reviewed the referenced application and offers no objection to its approval.

Public water and sanitary sewer service would be contingent upon the developer's compliance with the Authority's Statement of Policy; Rates, Rules and Regulations; and Design Standards. Should offsite easements be required to extend public water and/or sanitary sewer to this site, the applicant shall be responsible for acquiring such easements and dedicating them to Loudoun Water at no cost to the County or to Loudoun Water.

Should you have any questions, please do not hesitate to contact me.

Sincerely,



Julie Atwell
Engineering Administrative Specialist





DIVISIONS
ENERGY
GAS AND OIL
GEOLOGY AND
MINERAL RESOURCES
MINED LAND RECLAMATION
MINERAL MINING
MINES
ADMINISTRATION

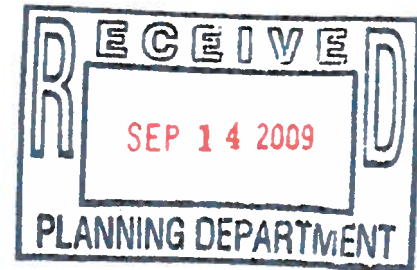
COMMONWEALTH OF VIRGINIA

Department of Mines, Minerals and Energy

Division of Mineral Mining
900 Natural Resources Drive, Ste. 400
Charlottesville, Virginia 22903
(434) 951-6310 FAX (434) 951-6325
www.dmmne.virginia.gov

September 11, 2009

Ms. Nicole Steele
Project Manager
Loudon County Department of Planning
1 Harrison Street Southeast
3rd Floor, MSC #62
Leesburg VA 20175



Re: SPEX 2009-0027, Luck Stone Quarry Expansion

Dear Ms. Steele:

Thank you for your referral on the above noted project.

As you know, the Division of Mineral Mining has its own set of regulations for mineral mining operations, including mine permitting and associated operational and reclamation plans. Under our regulations, this proposed expansion would have to be submitted to us as an amendment, and then undergo a regulatory review for compliance before approval.

At this time, we haven't received any submittal from the operator, so we have not conducted a formal review. Based on the information you provided, the proposal appears to be in general compliance with our regulations, but any definitive determination would not be possible until the proposal is submitted as an amendment to the existing mine permit held by Luck Stone.

Again, thank you for keeping us informed on this matter.

If we can be of any further service, please let me know.

Yours truly,

Thomas C. Bibb, P.E.
Engineering Manager

Xc: File

MEMORANDUM

TO: Jane McCarter, Department of Planning (#62)

FROM: Larr Kelly, Zoning Division, Department of Building and Development (#60)

DATE: September 23, 2010

RE: ZMAP 2009-0003/ZMAP 2009-0004/SPEX 2009-00027/SPEX 2010-0013: Luck Stone

As requested, I have reviewed the proffers, as revised through August 27, 2010 for ZMAP 2009-0003 and August 26, 2010 for ZMAP 2009-0004 applications. I have also reviewed the draft conditions for SPEX 2009-0027 and SPEX 2010-0013, both dated August 27, 2010. Pursuant to this review, I offer the following comments:

A. In regard to the proffers for ZMAP 2009-0003:

1. In regard to the preamble, in the sixteenth and seventeenth lines thereof, the applicant states that "The Special Exception uses for Stone Quarrying in the MR-HI Zoning District, as proposed in SPEX 2009-0027, are also sought for the Property in tandem with ZMAP 2009-0004". This makes it appear that ZMAP 2009-0004 applies to the "Property". However, it does not. I suggest that this statement be clarified so that it is clear that ZMAP 2009-0004 does not apply to the "Property". This language also makes it appear that "Stone Quarrying" is more than one use, while it is actually listed as a single specific use in the MR-HI use list. I suggest that the word "uses" be changed to "use" or that the applicant's intent in making this statement be otherwise clarified. Finally, the applicant has added a statement that "substantial conformance" shall "include modifications" in recognition that the quarry location is approximate depending on the location of the existing mineral resources. It is not clear what this is intended to mean. Substantial conformance is defined by the Zoning Ordinance and is not subject to modification. Additionally, the quarry is not the subject of this Zoning Map Amendment application as it is being processed as a separate Special Exception application. I suggest that this sentence be clarified or deleted.
2. In regard to proffer I.A., in the last line thereof, I suggest that the phrase "as Exhibit 1" be deleted, as the CDP is never referenced as Exhibit 1, nor is it labeled as Exhibit 1.
3. In further regard to proffer I.A., I suggest that the CDP be changed to be a Concept Plan/Rezoning Plat, as non-PD districts, such MR-HI are required

to submit a Rezoning Plat rather than a CDP, while the PD districts, such as PD-GI are required to submit a Concept Development Plan.

4. In regard to proffer I.B., I note that the applicant refers to “MR-HI by-right and special exception uses” and runs a series of uses together following this phrase. I suggest that the applicant identify what uses are by-right and which require special exception approval. I also note that the applicant identifies several uses as “accessory” even though they are identified in the use list as principal uses. Further the applicant lists examples of accessory uses, including “generators, fuel storage tanks, water storage tanks, telecommunications towers and other uses accessory to the water treatment plant”. It is not clear if the applicant intended to use the modifier “accessory to the water treatment” plant to refer to this entire list, or whether this modifier only referred to “telecommunications towers”. Accessory uses, by definition, need to be subordinate and incidental. I question whether these proposed “accessory” uses are going to be incidental and subordinate or whether they will be additional principal uses. If they are to be additional principal uses, I do not believe the applicant will want to limit themselves to their use only as accessory uses. Further, a use such as a telecommunications tower, in order to be accessory, must only be for the use of the principal user. If the intent is to allow cell phone providers to access the tower, then it will no longer be considered to be an accessory use. Again, I suggest that the applicant’s intent be clarified.
5. In further regard to proffer I.B., I note that one use the applicant lists is “Utility Lines”. This is not a specifically listed use in the MR-HI district. However, “Utility Transmission Lines, Overhead” is a special exception use in the MR-HI district. It is not clear if this is what the applicant intended to reference, but I note that no special exception for this use has been filed. I suggest that the applicant’s intent be clarified.
6. In further regard to proffer I.B., I note that the applicant has listed “Water Treatment Plant” and “Water Storage Tanks” as uses for the Property. These are special exception uses, and nothing has been provided in regard to these specific uses. Based on what has been submitted with all of the applications under review, it appears that these two uses are intended to be located on the property that is the subject of ZMAP 2009-0004, and not on this Property, so I am uncertain as to why they are included herein. Therefore, I question the appropriateness of including them here. However, I suggest, for each of the special exception uses identified in this use list, that the applicable special exception number be referenced for each such use. I also suggest, in the second line of the proffer, that the

phrase “, if approved,” be inserted prior to the phrase “special exception land uses”.

7. In further regard to proffer I.B., I note that the applicant has indicated the desire to be allowed to locate any use “anywhere within the portion of the property labeled ‘Proposed MR-HI’ and consistent with the Rezoning Plat and any applicable Special Exception Plat”. I suggest that the word “property” be capitalized. I also note that the applicant refers to a “Rezoning Plat” while in proffer I.A., the applicant referred to a “CDP”. I suggest that this inconsistency be eliminated. I also note that there are numerous setback and yard limitations that apply to a Stone Quarrying operation, and a significant portion of the Property is shown on the Concept Plan/Rezoning Plat as open space, which will not allow for any of the identified uses to be located just anywhere on the Property. I suggest that the word “anywhere” be deleted, and that the phrase “and consistent” be changed to “consistent”.
8. In further regard to proffer I.B., I note that the Special Exception Plat for SPEX 2010-0013 is inconsistent with the Concept Plan/Rezoning Plat for this ZMAP 2009-0003. This ZMAP shows the northwest portion of the Property as open space, and indicates that “a temporary construction access may be provided along the approximate alignment of the existing farm lane” while the SPEX 2010-0013 shows a 200 foot wide swath of the same area being cleared for a roadway. I suggest that these are two very different provisions. One suggests that no improvements are going to be done to the existing farm lane, while the second suggests a significant roadway through the open space portion of the Property. Additionally, the conditions for SPEX 2010-0013 do not call this roadway “temporary”. I suggest that this inconsistency should be clarified and eliminated.
9. In regard to proffer I.C., concerning the PD-GI Open Space Area along Goose Creek, I note that the applicant has indicated certain exceptions to this “no-build” buffer area. The applicant indicates the intent to be allowed to install “travel ways and utilities shown on the CDP”. I do not see any travel ways or utilities shown on the CDP, and I suggest that this inconsistency be clarified or eliminated. I also note that the applicant intends to allow for “subsurface utility lines that do not disturb existing vegetation”. I question what the difference is between the “utilities shown on the CDP” and the “subsurface utility lines” and I suggest that this be clarified. The applicant also proposes to allow for agricultural activities to occur in this open space area. If the idea of this buffer is to preserve existing vegetation to provide a filter against the Goose Creek, agricultural uses may not be a compatible use, as it would allow for the clearing of existing vegetation.

10. In regard to proffer I.D., in the first line thereof, I note that the applicant is now referring to the "Concept Development Plan" for the MR-HI zoning district. I again suggest that a consistent term be used and also again note that for a non-PD district, the correct term for the plat is "Rezoning Plat".
11. In further regard to proffer I.D., in the third and fourth lines thereof, I suggest that the phrase "and the Applicant reserves the right to amend these Proffers and associated Concept Development Plan in the future to permit development thereon" be deleted. Stating that there is a right to request a Zoning Concept Plan Amendment application is not necessary, and while the applicant would be allowed to request such change, the applicant cannot unilaterally amend the proffers, as suggested by this statement. Additionally, placing a specific provision about future development of an open space "no-build" buffer area brings the intent of the applicant into question in regard to the provision of such open space.
12. In further regard to proffer I.D., I note that the applicant indicates that "with the exception of the travelways shown on the CDP" there shall be no land disturbing activities between Sycolin Creek and Route 653 "except for agricultural uses, a Sycolin Creek Scenic Trail as described in Proffer II.D of this proffer statement, the location of utility lines and forest/tree maintenance". The only travelway appearing on the CDP is a road connecting Route 653 and Gant Lane. This travelway has a note stating that "location may vary". As written this allows for this road to be moved anywhere. I suggest that it be clarified that the location may vary only based on final engineering. I also note that the sentence structure of this provision is poorly designed as it states that "except" for the travel ways there will be no disturbance, but then goes on to list a whole series of additional exceptions. I suggest that this be written so as to include all of the exceptions in one series. I also question the purpose of this buffer and allowing agriculture to occur within it. I suggest that it be clarified that agriculture is limited to areas outside of the tree save areas. Additionally, I believe that the cross reference to "Proffer II.D." should be to "Proffer II.C."
13. In further regard to proffer I.D., I note that the applicant's exception for travelways is for travelways "shown on the CDP". This does not include the 200 foot wide roadway shown on the plat for SPEX 2010-0013, as it is not shown on the CDP, and the use of the existing farm lane does not call for its expansion to 200 feet. I suggest that the applicant's intent be clarified.

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14. In regard to proffer II.A., in the fourth line thereof, I suggest that the word “constructions” be changed to “construction” and that the reference to “trails” be specifically limited to the trails referenced in proffers II.B. and II.C.
 15. In further regard to proffer II.A., I note that the tree save areas can be disturbed for the construction of roads “as shown on the CDP”. It is not clear whether the phrase “as shown on the CDP” is intended to modify just the word “roads” or the whole list of exceptions “trails, utilities and storm water management facilities”. I read this to mean it is only referring to the roads, but if another meaning is intended, I suggest that it be clarified. However, I also note that the only road shown on the Concept Plan is the “travelway” connecting Route 653 and Gant Lane and this is not shown within a tree save area. I suggest that the applicant’s intent be clarified.
 - 16., In further regard to proffer II.A., in the fifth line thereof, the applicant states that the tree save area may be disturbed for “grading activities associated with any activities that are required pursuant to this proffer statement and/or shown on the approved construction plans and profiles as lying within such ‘Tree Save Area’ and for the construction of utilities necessary for development of the Property”. I do not know of any development “activities that are required” by these proffers, and this provision reads in such a way as to allow the applicant to show disturbances on the CPAPs and they would be permitted, regardless of the intent to preserve the tree save area. It also states that the construction of utilities is permitted in the tree save areas in two different places. I suggest that the applicant clarify their intent and limit the references to “utilities” to just one location.
 17. In regard to proffer II.B., regarding the Goose Creek Trail, I note that the applicant contemplates “encroachments” which shall be limited to the location of “utilities and road crossings”. I suggest that this be clarified. The Concept Plan/Rezoning Plat shows no roads or utility crossings in the 300’ Goose Creek Buffer, so it is not clear what the applicant is referencing. Additionally, it is not clear what the applicant means by “encroachments” into the trail. I suggest that this be clarified.
 18. In further regard to proffer II.B., in the tenth line thereof, I note that the applicant has indicated that the Goose Creek Trail “may be” field located in conjunction with County staff. I suggest that the phrase be changed to “shall be”. I also suggest that it be clarified that it is the applicant that shall field locate the trail in conjunction with County staff.

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19. In further regard to proffer II.B., in the last two lines thereof, the applicant states that the trail easement "shall be dedicated upon cessation of quarrying activities or sooner at the election of the Applicant". This is a very vague timing provision and I suggest that a more definitive timing provision be included. It is not clear when cessation of quarrying activities is to occur, whether this is intended to only refer to quarrying on the Property or whether this includes the quarry activities approved under SPEX 1990-0019, SPEX 1999-0006 and/or SPEX 2009-0027, nor is it clear why this needs to be a trigger when the trail is located away from the potential quarry site, in an area that is to be preserved as a tree save area. I suggest that an earlier point in time be used for the definite dedication of the trail. Additionally, I suggest that the applicant identify to whom the trail will be dedicated and who is to be responsible for the trail's maintenance.
 20. In regard to proffer II.C., concerning the Sycolin Creek Scenic Trail, it appears that this proffer mirrors proffer II.A., and to that end, the same comments I had regarding the Goose Creek Trail also apply to this proffer concerning the Sycolin Creek Trail.
 21. In regard to proffer II.D., I note that the applicant has indicated the intent to establish a reforestation area along the Sycolin Creek floodplain "as shown on the CDP". It is not clear where this reforestation area is, as it is not clearly shown on the Concept Plan/Rezoning Plat. As written it appears to mean that the full length of the west side of Sycolin Creek within the Property's boundaries, shall be reforested. I suggest that the applicant's intent be clarified.
 22. In further regard to proffer II.D., I note that the applicant intends to plant 100 deciduous and evergreen trees per acre in the reforestation area, but this same area may then be disturbed for any "uses and improvements related to clearing and grading for access roads, utilities or other construction activities related to the quarry". This language is so broad that it would allow for the removal of this reforested area. Inasmuch as quarrying is not to occur on the western side of the Sycolin Creek I question the necessity for this provision. I suggest that the applicant show the reforestation area and then commit to its preservation. I also suggest that the minimum size of the plantings be specified.
 23. In further regard to proffer II.D., in the last sentence thereof, the applicant includes statements that the "the approved reforestation plan" shall be submitted for review and approval by the County Urban Forester and that the approved reforestation plan shall be implemented concurrent with development of the area(s) immediately adjacent to the creek. I do not see

how “an approved reforestation plan” can be submitted for approval. I suggest that the applicant clarify this provision. I also do not see how this plan can be implemented concurrent with development of areas “immediately adjacent to the creek”, when there is a buffer and tree save area immediately adjacent to the creek which precludes such development. I suggest that different timing mechanisms are needed for the submission, review and approval of a reforestation plan, and for the implementation of such plan.

24. These proffers will need to be signed by all landowners, and be notarized, prior to the public hearing on this application before the Board of Supervisors.

B. In regard to the proffers for ZMAP 2009-0004:

1. In regard to the preamble, in the third line thereof, I suggest that the word “together,” be inserted in the parenthetical prior to the word “hereinafter”.
2. In further regard to the preamble, in the fifth line thereof, the applicant identifies parcel 153-35-5865 as the “Subject Property”. However, on the Concept Plan/Rezoning Plat for this Zoning Map Amendment application, the applicant states that only 148.8 acres of MCPI 153-35-5865 are being proposed for rezoning to MR-HI. This inconsistency needs to be eliminated and the area of the rezoning clarified. Additionally, if only part of the parcel is to be included in the rezoning, then the Concept Plan/Rezoning Plat needs to clarify what area of the parcel is included in the rezoning and which is not.
3. In further regard to the preamble, in the twelfth through fifteenth lines thereof, the applicant has added a statement that “substantial conformity” shall “include modifications” in recognition that the quarry location is approximate depending on the location of the existing mineral resources. It is not clear what this is intended to mean. Substantial conformance is defined by the Zoning Ordinance and is not subject to modification. Additionally, the quarry is not the subject of this Zoning Map Amendment application as it is being processed as a separate Special Exception application. I suggest that this sentence be clarified or deleted.
4. In regard to proffer 1., in the second line thereof, I suggest that the phrase “Rezoning for Loudoun Water” be changed to “Rezoning Loudoun Water” in order to accurately reflect what is shown on the Concept Plan/Rezoning Plat.

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5. In further regard to proffer 1., I note that this is a rezoning to a non-PD district. As such, a Rezoning Plat, rather than a Concept Development Plan, is required.
 6. In regard to proffer 2., I note that the applicant refers to "MR-HI by-right and special exception uses" and runs a series of uses together following this phrase. I suggest, in the first line of the proffer, that the phrase ", if approved," be inserted prior to the phrase "special exception uses". I also suggest that the applicant identify what uses are by-right and which require special exception approval. For clarity's sake, I suggest that it would also be appropriate to identify the special exception applications that apply to the identified special exception uses. I also note that the applicant identifies several uses as "accessory" even though they are identified in the use list as principal uses. Further the applicant lists examples of accessory uses, including "generators, fuel storage tanks, water storage tanks, telecommunications towers and other uses accessory to the water treatment plant". It is not clear if the applicant intended to use the modifier "accessory to the water treatment" plant to refer to this entire list, or whether this modifier only referred to "telecommunications towers". Accessory uses, by definition, need to be subordinate and incidental. I question whether these proposed "accessory" uses are going to be incidental and subordinate or whether they will be additional principal uses. If they are to be additional principal uses, I do not believe the applicant will want to limit themselves to their use only as accessory uses. Further, a use such as a telecommunications tower, in order to be accessory, must only be for the use of the principal user. If the intent is to allow cell phone providers to access the tower, then it will no longer be considered to be an accessory use. Again, I suggest that the applicant's intent be clarified.
 7. In further regard to proffer 2., I note that the applicant has indicated the desire to be allowed to locate any use "anywhere within the portion of the property labeled 'Proposed MR-HI' and consistent with the Rezoning Plat and any applicable Special Exception Plat". I suggest that the word "property" be changed to "Subject Property". I also note that the applicant refers to a "Rezoning Plat" while in proffer 1., the applicant referred to a "Concept Development Plan". I suggest that this inconsistency be eliminated. I also note that there are numerous setback and yard limitations that apply to a Stone Quarrying operation, which will not allow for any of the identified uses to be located just anywhere on the Property. I suggest that the word "anywhere" be deleted, and that the phrase "and consistent" be changed to "consistent". I also note that the Concept Plan/Rezoning Plat does not have an area identified as "Proposed MR-

HI", but does have an area labeled as "MR-HI Uses". I suggest that this inconsistency be eliminated.

8. In further regard to proffer 2., I note that one use the applicant lists is "Utility Lines". This is not a specifically listed use in the MR-HI district. However, "Utility Transmission Lines, Overhead" is a special exception use in the MR-HI district. It is not clear if this is what the applicant intended to reference, but I note that no special exception for this use has been filed. I suggest that the applicant's intent be clarified.
9. In further regard to proffer 2., I note that the uses listed in this proffer are also reflected in a note on Sheet 5 of the Concept Plan/Rezoning Plat. I suggest that the clarifications requested for proffer 2 also be reflected in the note on Sheet 5 of the Concept Plan/Rezoning Plat.
10. In regard to proffer 3., in the second line thereof, I suggest that the word "Comprehensive" be changed to "Comp." in order to accurately match what is shown on the Concept Plan/Rezoning Plat.
11. In further regard to proffer 3., in the fourth line thereof, the applicant refers to "the travel ways shown on the CDP" and states that "except" for the travel ways shown on the CDP, and activities necessary to the maintenance of the Goose Creek and Goose Creek reservoir, no surface land development activities shall be permitted in the No Build Buffer "except" for forest/tree maintenance and a public access easement for a future trail. I note that this sentence uses two exceptions in the same sentence. I suggest that just one list of exceptions should be included. Additionally, inasmuch as there are no travel ways shown on the Concept Plan/Rezoning Plat, I suggest that this reference be deleted.
12. In further regard to proffer 3., in the last line thereof, the applicant refers to "a public access easement for a future trail". However, nowhere in the proffers is there a provision for dedication of an easement for a trail, a provision indicating to whom the trail is to be dedicated, an indication as to where the trail is to be located or how its location is to be determined, a timing provision for when the trail is to be installed, an indication as to the type of trail it is to be, or any indication as to who is to be responsible for the installation and maintenance of such trail. I suggest that these matters be addressed.
13. In regard to proffer 4., I note that the "Applicant" shall dedicate sufficient right of way for a turnaround at the terminus of Gant Lane. I suggest that the word "Applicant" be changed to "Applicants" in order to match the term of art created in the preamble. I also suggest that a timing provision

be included for such dedication and that it be indicated who is to build such cul-de-sac.

14. These proffers will need to be signed by all landowners, and be notarized, prior to the public hearing on this application before the Board of Supervisors.

C. In regard to the conditions for SPEX 2009-0027:

1. In regard to the applicant's "NOTE" at the beginning of the proposed conditions, I note that their intent is to allow this stone quarry to be an expansion of the previously approved "Quarry D" on the west side of the Goose Creek. However, the conditions proposed are only to apply to the limits of the expansion area. This will result in one quarry with three different sets of special exception conditions, making administration of this development very difficult, and possibly inconsistent. I recommend that the entire quarry be subjected to one set of conditions.
2. In regard to condition 1., I note that it states that substantial conformity shall include modifications to the limits of the quarry and related permitted uses and that the quarry's location is approximate. This is not acceptable, as the limits shown on the SPEX Plat need to be honored, as they constitute the limits of the quarry. Additionally, the setbacks required by the Zoning Ordinance need to be honored and cannot be modified. Further the definition of "substantial conformance" cannot be modified. I suggest that this sentence be deleted.
3. In regard to condition 2., I note that the applicant states that within the cross hatched area of the SPEX Plat all conditions of previously approved SPEX 1990-0019 shall remain in effect except that the 200 foot wide buffer/berm along the southern side of the site, as specified in Condition 10 of SPEX 1990-0019, shall not be required. In essence, the applicant is suggesting amending the conditions for off-site property that is not a part of this application. This cannot be done. If the conditions for SPEX 1990-0019 need to be amended, then the property that is the subject of SPEX 1990-0019 needs to be a part of this application.
4. In further regard to condition 2., in the sixth line thereof, the phrase "crosshatched are the special exception plat" needs to be changed to "crosshatched area of the special exception plat.
5. In regard to condition 3., I note that the applicant has indicated that Stone Quarrying and Crushing, treating, washing and/or processing of materials"

may be located anywhere within the portion of the Property identified as "Proposed Quarry D Expansion Area" and "Overburden Placement Area". This is not acceptable. Section 3-1008(E) requires that the "location, limits and approximate square footage" of proposed excavation, settling ponds, washing facilities, crushing facilities, and treating facilities be depicted. The proposed condition suggests that what is shown on the SPEX Plat is meaningless. Stone Quarrying is limited to the areas depicted as "Proposed Quarry D Extension Area" and the location of the use "Crushing, treating, washing and/or processing of materials" needs to be identified, as required by the Ordinance. I also note that the SPEX Plat shows a 500 foot setback for processing equipment, so presumably there is an area for such facilities, which is not the same as the "Overburden Placement Area". Inasmuch as this setback needs to be met, it is also inaccurate to state that these facilities can go anywhere labeled "Overburden Placement Area". It is also inaccurate to state that the Stone Quarrying can occur within the Overburden Placement Area, as this is outside the limits of the Proposed Quarry Extension area. I suggest that this condition be amended to recognize the limits of the Quarry, the placement of facilities and the placement of overburden.

6. In further regard to condition 3., I note that the applicant refers to the Proposed Quarry D "Expansion" Area while the SPEX Plat shows a Proposed Quarry D "Extension" Area. I suggest that this inconsistency be eliminated.
7. In further regard to condition 3., in the third line thereof, the applicant refers to the "Property". However, in the opening Note, the applicant had referred to the term "Subject Property". I suggest that a consistent term be used.
8. In further regard to condition 3., I note that the applicant refers to the use "Crushing, treating, washing and/or processing of materials". This is a separate special exception use, and I do not believe that this has been requested. I believe the correct use is "Crushing, treating, washing and/or processing of materials accessory to a quarry operation, when conducted on the same property". If so, I suggest that the full title of the use, as described in the ordinance, be used. Additionally, I note that this by-right use does not allow for the stone quarried on the Subject Property to be crushed, treated, washed or processed on other property that is the subject of SPEX 1990-0019 or SPEX 1999-0006. This is another reason to recommend that one special exception for the entire Quarry D be pursued.

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9. In regard to condition 4., in the third line thereof, the applicant has again referred to the "Property" rather than the "Subject Property". I again suggest that a consistent term be used.
 10. In regard to conditions 6. and 8., concerning the dedication of right of way for Route 659 to accommodate a half section for VDOT's Route 659 Belmont Ridge Road Improvement project, I am not sure if we need both conditions, as they appear to provide for the same dedication of right of way. I suggest that they be merged.
 11. In further regard to conditions 6. and 8., I question the timing of the dedication. While condition 8. states that it will be dedicated upon the request of the County I note that this special exception contemplates that this property may not actually be used for quarrying for 40 years. Arguably, if the applicant is not using the special exception, then the condition is inapplicable, and conformance is only required if the use is commenced. Given that, I again suggest that this quarry should be the subject of one set of conditions, and not three different sets of special exception conditions.
 12. In regard to condition 7., I note that the applicant proposes removing the existing low-water farm lane bridge "upon completion of the proposed permanent Cochran Mill/Gant Lane private bridge". I recommend that the reference to "Cochran Mill" be changed to "Cochran Mill Road". Further, I note that nowhere in these conditions is there a "Cochran Mill Road/Gant Lane private bridge proposed. I also note that the bridge depicted on the SPEX Plat is outside of the limits of the special exception, so this condition would not be enforceable against the referenced parcel, MCPI 151-16-0598, although failure to construct the bridge could be used to deny permits to the quarry. I am also uncertain how this condition relates to SPEX 2010-0013, which expects to use the existing farm lane as a "temporary construction access", as shown on the SPEX Plat and the Rezoning Plat for ZMAP 2009-0003. I suggest that all of these matters be addressed.
 13. In regard to condition 9., I note that the applicant has indicated that they shall pay for the costs of design and installation of a traffic signal at Route 659 /Luck Lane intersection when warranted. However, I question whether this is intended to also cover performing the warrant study. I suggest that this be addressed, including the timing of the warrant study.
 14. In further regard to condition 9., I note that the applicant discusses the possible relocation of the Luck Stone site entrance as part of VDOT's Rt. 659 Improvement project. In such a case, the applicant proposes to reduce

their responsibility for the signal at their site entrance from 100% to 50%. I question the appropriateness of such a reduction. If they are responsible for a three way signal at the current entrance, it seems that the appropriate reduction would be to 75% at an entrance relocated to a four way intersection.

15. In regard to condition 10., I note that the applicant is to be responsible for the construction of a right turn lane at the Luck Lane/Rt. 659 intersection, as well as an advance flashing warning signal and reduced speed signs in the vicinity of the intersection. However, there is no timing mechanism proposed for these improvements. I suggest that a timing mechanism be included. It appears that these improvements should be in place with the first dig into any part of Quarry D. However, given that the condition will not be triggered until this special exception is used, the ability to enforce the condition in a timely manner is questionable. Again, I recommend that there be one special exception for the entire quarry, and not three sets of conditions for different parts of the quarry. This will help ensure the timely provision of the improvements.
16. In further regard to condition 10., I note that the requirement to construct the improvements is tied to the "acquisition of any necessary utility easements". However, there is nothing in the condition to indicate who is to be responsible for acquiring the easements. I suggest that this be addressed.
17. In further regard to condition 10., the applicant has indicated that, in order to improve sight distance, they shall clear trees on an off-site property, "subject to permission by the owner of that parcel including, if necessary, a permanent sight distance easement from said owner". The intent is not clear. It is not clear what responsibility the applicant has to obtain the permission of the off-site owner. Nor is the sentence very clear in stating that the clearing is contingent on obtaining the permission of the owner and a permanent sight distance easement. As written, it appears to mean that if a permanent easement is not granted, then they will not have to clear trees, even if permission to clear is granted. I suggest that the intent of this condition be clarified.
18. In regard to condition 11., concerning the dedication of right of way along Cochran Mill Road, I again note that unless the entire quarry is the subject of one application, then the applicant could resist making this dedication until such time as they actually use this special exception, which could be forty years after approval. I recommend that the entire Quarry D be the subject of one special exception and one set of conditions. This will ensure that all of the conditions are triggered by the first dig in any part of

the quarry. Otherwise, the risk that the right of way may not be available in a timely manner is increased.

19. In regard to condition 12., wherein the dedication of right of way for Gant Lane is addressed, I again note the same issue if the Subject Property and the remainder of the quarry are not subject to the same set of conditions. However, given that Gant Lane appears to serve a mostly internal function, this issue may not be as critical for this dedication. Nevertheless, I reiterate the concern.
20. In further regard to condition 12., I note that the applicant has indicated the willingness to dedicate a minimum of 25 feet of right-of-way along the Property's Gant lane frontage. I suggest that the reference to the "Property" be changed to "Subject Property". I also note that the SPEX Plat shows a portion of Gant Lane with a 25 foot right of way dedication and a portion of Gant lane with a 50 foot right of way dedication. I suggest that this inconsistency between the language in this condition and the language on the SPEX Plat be eliminated.
21. In regard to condition 14., I note that the applicant has proposed to reserve a buffer area on the southern side of Sycolin Creek between the Sycolin Creek Floodplain and the Operations Road next to the quarry, as shown on the SPEX Plat. However, this area is shown on the Concept Plan/Rezoning Plat for ZMAP 2009-0003 as a tree save area, and there is no "Operations Road" shown on the Concept Plan/Rezoning Plat. This is a significant inconsistency, as this SPEX Plat shows the Operations Road as running right through a proffered tree save area. The proffers for ZMAP 2009-0003 specify that the only roads allowed to be constructed in the tree save area are "roads (as shown on the CDP)". Therefore, this Operations Road is inconsistent with the proffers for ZMAP 2009-0003 and would not be permitted.
22. In further regard to condition 14., in the second and third lines thereof, I suggest that phrase "the quarry as generally as shown" be changed to "the quarry, generally as shown".
23. In regard to condition 15., in the first line thereof, I suggest that the word "generalized" be deleted. The limits of the quarry need to be as shown on the SPEX Plat as they need to be known limits, not generalized ones subject to modifications.
24. In regard to condition 16., I find the proposed language to be internally inconsistent. The condition proposes the erection of a fence "around the Subject Property generally proximate with the active operational quarry

area.” This leaves the location of the fence in question. It is not clear whether the fence needs to go around the Subject Property, or whether the fence needs to go around the active operational quarry area. These are two different things. I suggest that this be clarified. Additionally, if the fence is to go around the “Subject Property” that would require that it divide Quarry D at the boundary of the property subject to this application and the property subject to the earlier applications, which is another reason to recommend that the entire quarry be brought under one application.

25. In regard to condition 17., concerning the seeding and landscaping of overburden storage areas, I am uncertain as to how, or whether, this condition can be implemented. In condition 3. The applicant contemplates allowing “crushing, treating, washing and/or processing of materials” anywhere designated “overburden placement area”. Here, the applicant is proposing to seed and landscape all overburden storage areas. I do not see how all of the overburden storage areas shown on the SPEX Plat can be seeded and landscaped if they are being used for crushing, treating, washing and/or processing of materials. I suggest that this be clarified.
26. In regard to condition 19., which would require the establishment of air quality monitoring stations, it is not clear how this is to be required for the Subject Property separate from the same requirement for SPEX 1990-0019 and another such requirement for SPEX 1999-0006. I suggest that it be clarified how the three separate conditions for the three separate parts of the quarry are to be administered.
27. In regard to condition 20, I note that the applicant has indicated the intent to comply with the stone quarrying extraction and mining standards of Section 5-1506 of the Revised 1993 Zoning Ordinance. Inasmuch as this special exception may not be used for forty years from now, I am concerned with citing a specific standard in today’s Zoning Ordinance. I suggest that whatever the standards are at the time the quarry use is established on this property should be applied, and not standards that may be almost fifty years old by the time the quarry use is applied. I suggest that this condition be re-written to provide for conformance with the standards in effect at the time the quarry use is established on the Subject Property.
28. In regard to condition 22., I note that the applicant is supposed to submit a reclamation plan for the Subject Property to the County five years prior to the conclusion of quarrying activities. It is not clear to me how the County is supposed to know when this condition is triggered. I suggest that the applicant be required to submit an annual assessment of when the conclusion of quarrying activities is to occur on the Subject Property.

29. In further regard to condition 22., I note that under condition 33 for SPEX 1999-0006, the applicant is obligated to convey the quarry pit permitted by that special exception to the County for use as a public water impoundment or other appropriate public use. However, this condition 22 could well operate to negate that condition 33 as there is no commitment to convey the quarry pit to the public, and the quarry pit of SPEX 1999-0006 will not function for water impoundment if quarrying is still occurring on the Subject Property or once the quarry is extended into the Subject Property. This is another reason for having all three parts of the quarry under one set of special exception conditions.
30. In regard to condition 25., I note that the applicant states that any stone extracted from the Subject Property shall be transported off-site by way of the Goose Creek Bridge approved in SPEX 1990-0019 or, if approved, the Goose Creek Tunnel as proposed in SPEX 2010-0013. From this language it appears that the applicant intends to construct both the Bridge, and if approved, the Tunnel. I am not sure if this is the intent, but I do not think that both the Bridge and the Tunnel are contemplated. I believe that if the Tunnel is permitted, then the Bridge will not be constructed. If that is the case, then I suggest that this condition be re-drafted to make that clear. If that is not the case, then I question why both would be permitted.
31. In regard to condition 28., in the second line thereof, I suggest that the word "Property" be changed to the phrase "Subject Property". In addition, I suggest that the phrase "whichever is first in time" be inserted following the reference to "SPEX 2009-0027,".
- 32., In further regard to condition 28., in the seventh line thereof, the applicant has referenced the "CPI-V". I suggest that the full phrase be used prior to use of the acronym. In addition, I question whether this is the correct reference, as the usual reference is to the "CPI-U" and I do not know of a CPI-V.
33. In further regard to condition 28., in the third line of the second paragraph thereof, I suggest that the word "first" be inserted prior to the phrase "Zoning Permit". I also suggest that the phrase "whichever is first in time" be inserted in the fourth line following the phrase "is issued".
34. In further regard to condition 28., in the fourth and fifth lines thereof, I suggest that the phrase "primary fire and/or rescue service to the Property is no longer" be changed to read "primary fire and rescue services to the Subject Property are no longer".

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35. In further regard to condition 28., I note that this is a condition imposing on the applicant a responsibility to make a cash contribution to a publicly supported fire and rescue company. As such, it is more appropriate to add this as a note to the end of the conditions, rather than have the Board impose such a condition as a requirement of the special exception.
 36. In regard to condition 29., I note that it is written to state that it applies “unless otherwise fulfilled by development conditions imposed by SPEX 1990-0019 or SPEX 1999-0006”. Inasmuch as this condition requires the applicant to record background static water level measurements on the Subject Property, and the other two referenced SPEX applications do not apply to the Subject Property, I do not see how this condition can be fulfilled by development on other properties. I suggest that the reference to the two other SPEX’s in the first sentence be removed, or alternatively that the entire quarry be brought under one application and one set of conditions.
 37. In further regard to condition 29., in the last line thereof, I suggest that the word “each” be inserted prior to the phrase “site plan and/or grading plan”.
 38. In regard to condition 30., I again note that the applicant refers to fulfillment of this condition by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006. I do not see how development on the other portions of proposed Quarry D can supply static water level readings for all geotechnical borings and monitoring wells on the Subject Property for a period of one year prior to active quarrying on the Subject Property. This seems to be something that can only be accomplished on-site, during the one year prior to any digging on the Subject Property. I suggest that the reference to the two other SPEX’s in the first sentence be deleted, or alternatively that the entire quarry be brought under one application and one set of conditions.
 39. In regard to condition 31., in the third line thereof, I note that the applicant refers to “each gauge and each monitoring well”. However, it is not clearly stated what gauges and wells are being referenced. I suggest that this be clarified.
 40. In regard to condition 32., I suggest, in the first two lines of the condition, that the reference to the two other SPEX’s be removed, or that the entire quarry be brought under one application and one set of conditions. Additionally, I suggest that the applicant better identify the three “adjoining domestic wells” they are referencing. I suggest that the parcel number where the wells are located be identified.

41. In further regard to condition 32., in the fifth line of the condition, I note that the applicant refers to "the Applicant's operation". This appears to contemplate the entire quarry without determining which portion of the quarry caused the damage to the adjoining well, but could also be read to mean only if operations on the Subject Property caused the damage. I suggest that it be clarified how this is intended to be administered.
42. In regard to condition 34., I note that the applicant is being required to collect water samples for a period of one year prior to active quarrying on the Subject Property. I also note that the applicant again has used the phrase "unless otherwise fulfilled by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006". I do not see how the applicant can collect samples for one year prior to the start of quarrying on the Subject Property through the conditions on other SPEX's. I suggest that the reference to the other SPEX be deleted or that the entire quarry be brought under one application with one set of conditions.
43. In regard to condition 36., in the last line thereof, there is a reference to "DMME". I suggest that the full term be used before the acronym is used.
44. In regard to condition 37., in the second and third lines thereof, the applicant uses the phrase "for a period of one (1) year prior to active quarrying". Inasmuch as this condition requires the submission of a contingency plan, as opposed to requiring a form of monitoring, I do not see why this phrase is used here. I suggest that it be deleted.
45. In further regard to condition 37., in the fourth line thereof, I suggest that the phrase "whichever is first in time" be inserted following the phrase "stone quarrying uses".
46. In regard to condition 37(2)., in the last line thereof, there is a cross-reference to "Condition #25". I believe that this is supposed to cross reference condition 33 and I suggest that this be so changed.
47. In further regard to condition 37., in the last paragraph thereof, I note that the applicant has indicated the intent to provide updated contact information for its contingency plan once every five years. This is not acceptable, as the contact information needs to be current at all times. I suggest that his condition be changed to ensure that the County is immediately notified of any change in contact information.
48. In regard to condition 38., in the second and third lines thereof, the applicant refers to "the Director of the Building and Development". I

suggest that this be changed to be either “the Director of Building and Development” or “the Director of the Department of Building and Development”.

49. In further regard to condition 38., in the eleventh through fourteenth lines thereof, I suggest that the sentence that begins “Recently initiated surface water monitoring . . .” be deleted as it adds nothing to the condition.
50. In further regard to condition 38., in the last sentence of the first paragraph thereof, I suggest that the word “following” be inserted prior to the phrase “evaluation criteria”.
51. In further regard to condition 38., I note that the applicant proposes to locate six test pumping wells as shown on the Special Exception Plat. I assume this means that these wells are in addition to any required by SPEX 1999-0006. However, if all parts of the quarry were subject to one application and one set of conditions, then there would not have to be two sets of pumping wells provided.
52. In further regard to condition 38., I note that the applicant refers to a number of test pumping well sites shown on the SPEX Plat. However, I do not see any of the referenced sites. I suggest that this inconsistency be eliminated. Additionally, in the last line of first paragraph under “Pumping and Observation Well Installation”, I suggest that the word “pumping” be inserted prior to the word “test”.
53. In further regard to condition 38., I urge staff to review the pumping test procedure to determine whether it is adequate as proposed. I note that the applicant states in the body of the condition that the testing procedure is “consistent with previously performed aquifer testing associated with SPEX 1999-0006”. I urge staff to determine the accuracy of this statement as some things about this condition differ from the similar condition for SPEX 1999-0006.
54. In further regard to condition 38., I note that there is nothing in this condition dealing with surface water and groundwater quality as is provided in SPEX 1999-0006. I urge staff to determine the acceptability of this.
55. In further regard to condition 38., in the last paragraph thereof, the applicant has included a brief statement concerning the evaluation of the hydrogeologic testing program. I urge staff to carefully review this provision as there is very little provided herein in comparison to what is provided in SPEX 1999-0006.

56. In regard to condition 40., in the second line thereof, I suggest that the phrase "for a period of the period of validity" be changed to "for a period of validity". Additionally, in the fourth line of the condition, I suggest that the phrase "shall be" be changed to "within".
 57. In regard to condition 43., in the first line thereof, I suggest that the phrase "If any wood turtles are found during quarry development" be deleted. Additionally, in the fifth and sixth lines of the condition, I suggest that commas be placed around the phrase "that includes photos and a description of wood turtles". I further suggest, in the sixth line of the condition, that the phrase "that is distributed" be deleted. In addition, I suggest that it be clarified when the applicant intends to distribute the referenced flyer to its site workers.
- D. In regard to the conditions for SPEX 2010-0013:
1. In regard to the "NOTE" at the beginning of the conditions, I note that the applicant intends to "revise conditions 15 through 19 approved pursuant to SPEX 1990-0019" (the Bridge Conditions). However, the property that is the subject of the application does not include the property that is the subject of SPEX 1990-0019. Unless the property that is the subject of SPEX 1990-0019 is also the subject of this application, then this application cannot serve to amend the conditions on property that is not the subject of the application. I suggest that the entire quarry area be included in this SPEX, to include the areas that are the subject of SPEX 1990-0019, SPEX 1999-0006 and SPEX 2009-0027.
 2. In further regard to the "NOTE" at the beginning of the conditions, I note that the applicant asserts that upon the opening of the proposed inter-quarry tunnel, the Bridge Conditions "shall be deleted and replaced" by the conditions contained herein. It appears that the applicant is attempting to have the option to construct either the Bridge or a Tunnel. I suggest that it be clarified whether the applicant intends to construct one or the other and not that there be the option for either.
 3. In further regard to the "NOTE" at the beginning of the conditions, I am also concerned with the applicant's stated timing for making a decision on whether to construct a bridge or a tunnel. As stated herein, the option to construct a bridge would not be deleted and replaced until such time as the tunnel is open. This could even allow for both a bridge and a tunnel to be constructed if the bridge was constructed first. I do not believe that this should be allowed and I suggest that this language be changed so that it

becomes clear that once this application is approved, the bridge is no longer an option.

4. In further regard to the "NOTE" at the beginning of the conditions, I note that the applicant is asserting that where there are conflicts between the "prior Quarry D special exception conditions" and the conditions approved with this special exception, the most recent in time shall govern. It is not clear how this timing provision is to be administered if SPEX 2009-0027 and SOPEX 2010-0013 are approved at the same time. Additionally, the term "Quarry D special exception" has no point of reference, as neither SPEX 1990-0019, SPEX 1999-0006, or SPEX 2009-0027 are specifically identified as "Quarry D". I suggest that this be clarified. Additionally, given that there are three different sets of conditions for "Quarry D" it is not clear if the intent here is for conflicting provisions between the three sets of conditions to always be governed by the most recent. This is not how the conditions would be administered. The conditions applicable to each respective part of the quarry would have to be applied to the respective portions of the quarry. This is especially problematic for this application as it only applies to a narrow strip of land running through parts of two special exception areas and an open space area of a separate zoning map amendment area. The potential for conflict is why I recommend that the entire quarry be made subject to one special exception and one set of conditions.
5. In regard to condition 1., I note that the applicant has indicated that uses allowed on the Subject Property shall be conducted in substantial conformance with the Special Exception Plat "dated May 5, 2010 as revised through August 26, 2010. However, the Special Exception Plat has conflicting dates on it. On one sheet the revision date is August 6, 2010, while on the other sheet it is August 26, 2010. I suggest that this inconsistency be eliminated.
6. In regard to condition 2., I note that the applicant states that approval of this SPEX 2010-0013 will not invalidate nor replace the development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006. This is in direct conflict with the statement contained in the above referenced "NOTE", which states that it is intended that these conditions replace several of the conditions for SPEX 1990-0019. However, it is the more accurate statement. As a result of approving this application on the property that is the subject of this application, only the property that is the subject of the application is affected. The area that is the subject of SPEX 1990-0019 will continue to have conditions calling for the construction of a "conveyor/bridge" across the Goose Creek. In order to eliminate this, the entire property that is the subject of SPEX 1990-0019 needs to be the

subject of this application. However, I recommend that the entirety of the three portions of the quarry be included in this application.

7. In further regard to condition 2., I question exactly what the special exception use is that is being requested. This appears to strictly be accessory to a Stone Quarrying use. It seems to be an accessory use that is not shown on the approved special exception plat, and that the construction of the tunnel would not be in substantial conformance with the approved special exception. In order to amend the existing special exception the entirety of the special exception area needs to be included in this special exception application. In this case, I also note that the proposed tunnel also includes a roadway through the open space area of a separate zoning map amendment, which would be inconsistent with the concept plan/rezoning plat for that zoning map amendment, and would be in a portion of that zoning map amendment that is not approved for Stone Quarrying. If this use is accessory to Stone Quarrying and Stone Quarrying is not permitted in the area through which it traverses, then it cannot locate in this area.
8. In further regard to condition 2., I note that the SPEX Plat contains a note indicating that the "approved bridge will not be constructed". This note is included in an area that is not the subject of the application. Again, conditions on property that is not the subject of the application cannot be amended by this application.
9. In further regard to condition 2., I note that the subject property does include a long swath of land that carries the notation "Temporary Construction Access May Be Provided Along the Alignment of the Existing Farm Lane". I suggest that the applicant clarify their intent in regard to this "Temporary Construction Access". I suggest that it be clarified when such access would be used, whether it would require the removal of any existing vegetation through the open space area of ZMAP 2009-0003, whether a new roadway is intended to be constructed over the existing farm lane, and if so, what size of a roadway is intended, and how temporary the road would be.
10. In regard to condition 6, regarding compliance with the stone quarrying and extraction standards of the Zoning Ordinance, I suggest that rather than referencing a specific section of the existing ordinance, that conformance with the standards in effect at the time of construction of the tunnel be used.
11. In regard to condition 7., in the third line thereof, I suggest that the word "and" be inserted prior to the word "only".

12. In regard to condition 13., in the second line thereof, I suggest that the word "on" be inserted prior to the phrase "its properties".
13. In further regard to condition 13., regarding the existing farm lane, I note that the condition reads in a manner stating that the applicant "will utilize the existing farm lane and bridge". This implies that no change shall be made to the lane or bridge. Yet, the applicant then states that "the precise location of the farm lane may change", which implies that the applicant intends to do some road construction and not use the existing lane and bridge. I suggest that the applicant's intent be clarified.
14. In further regard to condition 13., I suggest that what is to become of the "temporary construction access" once the tunnel is opened be addressed. Currently, there is nothing in these conditions that would require the "temporary" road to ever be closed.
15. In regard to condition 14., in the first line thereof, I suggest that the phrase "If any wood turtles are found during quarry development" be deleted. Additionally, in the fifth and sixth lines of the condition, I suggest that commas be placed around the phrase "that includes photos and a description of wood turtles". I also suggest, in the sixth line of the condition, that the phrase "that is distributed" be deleted. Further, I suggest that it be clarified when the referenced flyer is to be distributed to site workers.
16. In regard to condition 15., I find its meaning to be unclear. It states that groundwater in the tunnel will be continually monitored by "measuring channeled water towards trenches". It appears that two things were contemplated. First, that the groundwater in the tunnel would be measured and second, that the groundwater would be channeled towards trenches. However, there appears to be something missing from this condition. I suggest that it be clarified.

Important! The adopted Affidavit and Reaffirmation of Affidavit forms shall not be altered or modified in any way. Any form that is altered or modified in any way will not be accepted.

REAFFIRMATION OF AFFIDAVIT

In reference to the Affidavit dated August 11, 2010 for the Application of
(enter date of affidavit)

Luck Stone Corporation

(enter name(s) of applicant(s))

in Application Number(s): ZMAP 2009-0003, SPEX 2009-0027 & SPEX 2010-0013
(enter application number(s))

I, Mark Vigil, Agent, do hereby state that I am an

(check one) applicant (must be listed in Paragraph C of the above-described affidavit)

✓ applicant's authorized agent (must be listed in Paragraph C of the above-described affidavit)

and that to the best of my knowledge and belief, the following information is true:

(check one)

 I have reviewed the above-described affidavit, and the information contained therein is true and complete as of (today's date); or

✓ I have reviewed the above-described affidavit, and I am submitting a new affidavit which includes changes, deletions or supplemental information to those paragraphs of the above-described affidavit indicated below:

(Check if applicable)

✓ Paragraph C-1

✓ Paragraph C-2

 Paragraph C-3

 Paragraph C-4(a)

 Paragraph C-4(b)

 Paragraph C-4(c)

WITNESS the following signature: 

(check one)

 Applicant

✓ Applicant's Authorized Agent

Mark Vigil, Agent

(Type or print first name, middle initial, last name and title of signee)

Subscribed and sworn to before me this 20th day of September, 2010,
in the State/Commonwealth of Virginia, County/City of Loudoun.

Sharon S. Poindexter
Notary Public

My Commission expires: 7-31-2011

SHARON S. POINDEXTER
NOTARY PUBLIC
Commonwealth of Virginia
Reg. #7135132
My Commission Expires 7-31-2011

RECEIVED

SEP 20 2010

LOUDOUN COUNTY
DEPARTMENT OF PLANNING

I, Mark Vigil, Agent, do hereby state that I am an

 Applicant

☒ Applicant's Authorized Agent listed in Section C.1. below

in Application Number(s): SPEX 2009-0027, ZMAP 2009-0003 & SPEX 2010-0013

and that to the best of my knowledge and belief, the following information is true:

C. DISCLOSURES: REAL PARTIES IN INTEREST AND LAND USE PROCEEDINGS

1. REAL PARTIES IN INTEREST

The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS** and **LESSEES** of the land described in the application* and if any of the forgoing is a **TRUSTEE**** each **BENEFICIARY** of such trust, and all **ATTORNEYS**, and **REAL ESTATE BROKERS**, and all AGENTS of any of the foregoing.

All relationships to the persons or entities listed above in **BOLD** print must be disclosed. Multiple relationships may be listed together (ex. Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner, etc.) For a multiple parcel application, list the Parcel Identification Number (PIN) of the parcel(s) for each owner(s).

| <i>PIN</i> | <i>NAME (First, M.I., Last)</i> | <i>ADDRESS (Street, City, State, Zip Code)</i> | <i>RELATIONSHIP (Listed in bold above)</i> |
|--|---|---|---|
| 152-36-1675, 152-25-5356, 151-37-7403, 151-16-0598 & 152-39-5797 | Luck Stone Corporation | PO Box 29682 Richmond, VA 23242-0682 | Applicant & Title Owner |
| 153-35-5865 | Loudoun Water f/k/a Loudoun County Sanitation Authority | 44865 Loudoun Water Way PO Box 4000 Ashburn, VA 20146-2591 | Title Owner |
| 152-26-8334, 152-16-8431 & 152-27-4798 | City of Fairfax | 10455 Armstrong Street Fairfax, VA 22030 | Title Owner |
| | Wetland Studies and Solutions, Inc. | 5300 Wellington Branch Drive, Suite 100 Gainesville, VA 20155 | Environmental Consultant/Agent |
| | Zimar & Associates, Inc. | 10105 Residency Road, Suite 207 Manassas, VA 20110 | Arboriculture/ Forestry Consultant/Agent |
| | Dewberry & Davis LLC | 8401 Arlington Boulevard Fairfax, VA 22031 | Engineer/Agent |
| | Patton Harris Rust & Associates, Inc. | 14532 Lee Road Chantilly, VA 20151 | Transportation Consultant/Agent |
| | Analytical Services, Inc. | 402 N. West Street Culpeper, VA 22701 | Environmental Consultant/Agent |
| | Golder Associates Inc. | 200 Century Parkway, Suite C Mt. Laurel, NJ 08054 | Geotechnical Consultant/Agent |
| | Dr. G. Sauer Corporation | 560 Herndon Parkway, Suite 310 Herndon, Va 20170 | Tunnel Consultant/Agent |
| | Walsh, Colucci, Lubeley, Emrich & Walsh, P.C. | 1 East Market Street, 3 rd Fl Leesburg, VA 20176 | Attorneys/Planners/ Agent |

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

** In the case of a TRUSTEE, list Name of Trustee, name of Trust, if applicable, and name of each beneficiary.

Check if applicable:

 There are additional Real Parties in Interest. See Attachment to Paragraph C-1.

LISTING OF INDIVIDUAL AGENTS

1. Luck Stone Corporation

Mark Vigil
John LeGore
John Pullen
Doug Palmore
Linda Tissiere
Joe Carnahan
Phil Davidson
Lewis Murphy
John Thompson
Mark D. Williams
Charlie Luck
Steve Willis
Benjamin Thompson

1. Loudoun Water f/k/a Loudoun County Sanitation Authority

Dale Hammes
Karen Arnold
Beate Wright
Timothy Coughlin

2. City of Fairfax

Bob Sisson (City Manager)
Brian J. Lubkeman, Esq.

3. Wetland Studies and Solutions, Inc.

Mark W. Headly
Michael S. Rolband
Kim Snyder

4. Zimar & Associates, Inc.

Donald E. Zimar

5. Dewberry & Davis LLC

William E. Fissel
Zeb Hoffman

6. Patton Harris Rust & Associates, Inc.

Douglas R. Kennedy
Laurie H. Butakis

7. Analytical Services, Inc.

Michael L. Maloy, CPG

8. Golder Associates Inc.

Ramesh Venkatakrishnan, Ph.D., P.G.

9. Dr. G. Sauer Corporation

Juergen Laubbichler, M.S., P.E.

If multiple copies of this page are provided please indicate Page 2 of 3 pages.

10. Walsh, Colucci, Lubeley, Emrich & Walsh, P.C.

J. Randall Minchew

Andrew Painter

Kimberlee Welsh Cummings

Christine Gleckner

William J. Keefe

Michael Romeo

If multiple copies of this page are provided please indicate Page 3 of 3 pages.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Luck Stone Corporation
P.O. Box 29682, Richmond, VA 23242-0682

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
| C.S. Luck, III | True F. Luck |
| C.S. Luck IV | Cynthia L. Haw |
| Terrell L. Harrigan | |
| | |
| | |
| | |
| | |
| | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| C.S. Luck, III | Chairman |
| C.S. Luck, IV | President/CEO |
| John N. Pullen | Vice President |
| Roy Goodman | Chief Financial Officer |
| Wanda Ortwine | Chief Family Officer |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Loudoun Water f/k/a Loudoun County Sanitation Authority
44865 Loudoun Water Way, PO Box 4000, Ashburn, VA 20146-2591

Description of Corporation:

☐ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|--|---|
| Loudoun Water is a political subdivision of the state. In May of 1959, the Loudoun County Board of Supervisors created Loudoun Water by a resolution, through the Water and Waste Authorities Act, for the sole purpose of providing water and wastewater service to residents of the unincorporated areas of Loudoun County | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|--|--|
| Fred Jennings | Chairman |
| Dale Hammes | General Manager and Board Treasurer |
| Edward Burrell, Charles Harris, Tanja Thompson, Dimitri Kesari, Mark Koblos, Leonard Mitchel, Patti Psaris, Johnny Rocca | Board Members |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

City of Fairfax

10455 Armstrong Street, Fairfax, VA 22030

Description of Corporation:

☐ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
| The City of Fairfax is an independent city in the Commonwealth of Virginia. | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| Bob Sisson | City Manager |
| Robert F. Lederer | Mayor |
| Joan W. Cross, Daniel F. Drummond, Jeffrey C. Greenfield, David L. Meyer, Gary J. Rasmussen, Steven C. Stombres | Town Council Members |
| | |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Wetland Studies and Solutions, Inc.
5300 Wellington Branch Drive, Suite 100, Gainesville, VA 20155

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
| Michael S. Rolband, Sole Shareholder | |
| | |
| | |
| | |
| | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| | |
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Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Zimar & Associates, Inc., 10105-C Residency Road, Manassas, Virginia 20110

Description of Corporation:

☒ There are 100 or fewer shareholders and all shareholders are listed below.

☐ There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.

☐ There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

☐ There are more than 500 shareholders and stock is traded on a national or local stock exchange.

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|--|--|
| Donald E. Zimar | |
| | |
| | |
| | |
| | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|------------------------------------|---|
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Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land,** all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Dewberry & Davis LLC, 8401 Arlington Boulevard, Fairfax, VA 22031

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
| The Dewberry Companies LC, Member | |
| James L. Beight, Member | |
| Dennis M. Couture, Member | |
| | |
| | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| | |
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Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

The Dewberry Companies LC, 8401 Arlington Boulevard, Fairfax, VA 22031

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME <i>(First, M.I., Last)</i> | SHAREHOLDER NAME <i>(First, M.I., Last)</i> |
|---|---|
| Sidney O. Dewberry, Member | The Michael Sidney Dewberry Credit Shelter Trust u/a/d 11/23/05 (f/b/o 4 minor children of Michael S. Dewberry), Member |
| Barry K. Dewberry, Member | |
| Karen S. Grand Pre, Member | |
| Thomas L. Dewberry, Member | Michael Sidney Dewberry (deceased) |
| | |

Names of Officers and Directors:

| NAME <i>(First, M.I., Last)</i> | Title <i>(e.g. President, Treasurer)</i> |
|---|--|
| | |
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Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Patton Harris Rust & Associates, Inc., 14532 Lee Road, Chantilly, VA 20151

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
| Fred D. Ameen, Jr., Michael A. Hammer | John D. Reno, Robert A. Munse |
| Michael G. Baker, J. Christopher Holt | Michael G. Reimer, John C. Loyd, |
| Thirumalainivas Bhakthavatsaia, | Thomas D. Rust, Ronald A. Mislowsky |
| Paul Dec Holt, Jr., Helman A. Castro, | Robert A. Munse, Karl V. Schaeffer, |
| Mark Jerussi, Frank H. Donaldson, | Patricia D. Monday, Paul D. Noursi, |
| Ralph T. Jones, Timothy F. Fletcher, | James C. Slora, Thomas L. Osborne, |
| Bruce J. Frederick, Douglas R. Kennedy, | David H. Steigler, Peter J. Stone, |
| Graeme C. Lake, L. Nathaniel Ballard, | Kevin D. Wood, Earl R. Sutherland, |
| Mark A. Thomas, Scott R. Wolford, | Edward G. Venditti, John D. Wright, |
| Susan S. Wolford | |
| | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| Charles B. Perry, II | CEO |
| | |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Analytical Services, Inc., 402 N. West Street, Culpeper, VA 22701

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
| Michael A. Slivinski | |
| Ralph A. Abbondanza | |
| Michael L. Maloy | |
| John b. Stanley | |
| | |
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| | |

Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| Michael Slivinski | President |
| Ralph Abbondanza | Secretary/Treasurer |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

· **2. CORPORATION INFORMATION** (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Golder Associates Inc., 200 Century Parkway, Suite C, Mt. Laurel, NJ 08054

Description of Corporation:

☐ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☒ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME (First, M.I., Last) | SHAREHOLDER NAME (First, M.I., Last) |
|---|---|
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Names of Officers and Directors:

| NAME (First, M.I., Last) | Title (e.g. President, Treasurer) |
|---|--|
| | |
| | |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Dr. G. Sauer Corporation, 560 Herndon Parkway, Suite 310, Herndon, VA 20170

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME <i>(First, M.I., Last)</i> | SHAREHOLDER NAME <i>(First, M.I., Last)</i> |
|---|---|
| Dr. Gerhard Sauer | |
| | |
| | |
| | |
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| | |

Names of Officers and Directors:

| NAME <i>(First, M.I., Last)</i> | Title <i>(e.g. President, Treasurer)</i> |
|---|--|
| | |
| | |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

2. CORPORATION INFORMATION (see also Instructions, Paragraph B.3 above)

The following constitutes a listing of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 100 or fewer shareholders, a listing of all of the shareholders, **and if such corporation is an owner of the subject land**, all **OFFICERS** and **DIRECTORS** of such corporation. (Include sole proprietorships, limited liability companies and real estate investment trusts).

Name and Address of Corporation: (complete name, street address, city, state, zip code)

Walsh, Colucci, Lubeley, Emrich & Walsh, P.C.
1 E. Market Street, 3rd Floor, Leesburg, VA 20176

Description of Corporation:

☒ *There are 100 or fewer shareholders and all shareholders are listed below.*

☐ *There are more than 100 shareholders, and all shareholders owning 10% or more of any class of stock issued by said corporation are listed below.*

☐ *There are more than 100 shareholders but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.*

☐ *There are more than 500 shareholders and stock is traded on a national or local stock exchange.*

Names of Shareholders:

| SHAREHOLDER NAME <i>(First, M.I., Last)</i> | SHAREHOLDER NAME <i>(First, M.I., Last)</i> |
|---|---|
| David J. Bomgardner | E. Andrew Burcher |
| Thomas J. Colucci | Peter M. Dolan, Jr. |
| Jay du Von | Jerry K. Emrich |
| William A. Fogarty | John H. Foote |
| H. Mark Goetzman | Bryan H. Guidash |
| Michael D. Lubeley | J. Randall Minchew |
| M. Catharine Puskar | John E. Rinaldi |
| Lynne J. Strobel | Garth M. Wainman |
| Nan E. Walsh | Martin D. Walsh |

Names of Officers and Directors:

| NAME <i>(First, M.I., Last)</i> | Title <i>(e.g. President, Treasurer)</i> |
|---|--|
| | |
| | |
| | |
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| | |

Check if applicable:

☐ There is additional Corporation Information. See Attachment to Paragraph C-2.

3. PARTNERSHIP INFORMATION

The following constitutes a listing of all of the **PARTNERS**, both **GENERAL** and **LIMITED**, in any partnership disclosed in the affidavit.

Partnership name and address: (complete name, street address, city, state, zip)

___ (check if applicable) The above-listed partnership has no limited partners.

Names and titles of the Partners:

| <i>NAME</i> <i>(First, M.I., Last)</i> | <i>Title</i> <i>(e.g. General Partner, Limited Partner, etc)</i> |
|---|---|
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Check if applicable:

___ Additional Partnership information attached. *See Attachment to Paragraph C-3.*

4. ADDITIONAL INFORMATION

- a. One of the following options **must** be checked:

☐ In addition to the names listed in paragraphs C. 1, 2, and 3 above, the following is a listing of any and all other individuals who own in the aggregate (directly as a shareholder, partner, or beneficiary of a trust) 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE of the land:

☒ Other than the names listed in C. 1, 2 and 3 above, no individual owns in the aggregate (directly as a shareholder, partner, or beneficiary of a trust) 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE of the land:

Check if applicable:

☐ Additional information attached. *See Attachment to Paragraph C-4(a).*

- b. That no member of the Loudoun County Board of Supervisors, Planning Commission, Board of Zoning Appeals or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or though an interest in a partnership owning such land, or as beneficiary of a trust owning such land.

EXCEPT AS FOLLOWS: (If none, so state).

None

Check if applicable:

☐ Additional information attached. *See Attachment to Paragraph C-4(b).*

- c. That within the twelve-month period prior to the public hearing for this application, no member of the Loudoun County Board of Supervisors, Board of Zoning Appeals, or Planning Commission or any member of his immediate household, either individually, or by way of partnership in which any of them is a partner, employee, agent or attorney, or through a partner of any of them, or through a corporation (as defined in the Instructions at Paragraph B.3) in which any of them is an officer, director, employee, agent or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has or has had any business or financial relationship (other than any ordinary customer or depositor relationship with a retail establishment, public utility, or bank), including receipt of any gift or donation having a value of \$100 or more, singularly or in the aggregate, with or from any of those persons or entities listed above.

EXCEPT AS FOLLOWS: (If none, so state).

None

Check if applicable:

☐ Additional information attached. *See Attachment to Paragraph C-4(c).*

D. COMPLETENESS

That the information contained in this affidavit is complete, that all partnerships, corporations (as defined in Instructions, Paragraph B.3), and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, OR LESSEE of the land have been listed and broken down, and that prior to each hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including any gifts or business or financial relationships of the type described in Section C above, that arise or occur on or after the date of this Application.

WITNESS the following signature:

Mark Vigil LUCK STONE
check one: ☒ Applicant or ☐ Applicant's Authorized Agent

Mark Vigil, Agent
(Type or print first name, middle initial and last name and title of signee)

Subscribed and sworn before me this 20th day of September 2010, in
the State/Commonwealth of Virginia, in the County/City of London.

Sharon S. Poindexter
Notary Public

My Commission Expires: 7-31-2011

| |
|--|
| SHARON S. POINDEXTER NOTARY PUBLIC Commonwealth of Virginia Reg. #7135132 My Commission Expires <u>7-31-2011</u> |
|--|

